

REPORT

OF THE

Medical Officer of Health

For the Year ending December, 31st, 1933.

*To the Public Health and Housing Committee of the
County Council of the County Palatine of Chester
and to the Members of the County Council.*

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INTRODUCTION.

*To the Chairman and Members of the
Public Health Committee of the
Cheshire County Council.*

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present to you my report on the health and sanitary circumstances of the County for the year 1933. The outstanding feature in the Vital Statistics is the reduction in the Infantile Mortality Rate, and only once, i.e., in 1932, has it reached such a low figure.

The position with regard to the treatment of the sick poor continues as in previous years but a scheme for the re-classification of the Institutions is at present under consideration.

Much attention has again been given throughout the year to the water supplies of the County, and I am pleased to say that this County in comparison with many others is in a very favourable position. With very few exceptions no district has suffered materially from the prolonged drought.

Much valuable work is being done by your Tuberculosis Officers under the reorganised Tuberculosis service, which although not yet complete in all areas is most efficient in those districts where the new scheme is already in operation.

The appointment of 5 full-time Veterinary Officers in addition to the Chief Veterinary Officer has unquestionably increased the efficiency of the working of the Milk and Dairies Acts and Orders, and I would specially refer you to page 76 of this report showing the valuable work carried out throughout the year.

A complete and comprehensive survey of the County Public Health services was carried out by Officers of the Ministry of Health at the beginning of the year followed by a very satisfactory report from the Minister in the latter part of the year. The Local Authorities are very much alive to their many statutory duties which they continue to carry out in a most gratifying manner.

I am,

Mr. Chairman and Gentlemen,

Your obedient Servant,

IAN C. MACKAY, M.B., Ch.B., D.P.H.,

County Medical Officer.

Staff of the Public Health Department.

County Medical Officer of Health and ...	Ian Campbell Mackay, M.B., Ch.B.,	
Chief School Medical Officer		L.P.H.
Lady Assistant Medical Officer	... Jean R. Shaw, M.B., Ch.B., D.P.H.	
District Tuberculosis Officers ...	... J. Hague, M.R.C.S., L.R.C.P., D.P.H.	
	L. I. Henzell, M.D., B.Sc., D.P.H.	
	D. W. Tongh, M.B., Ch.B., D.P.H.	
Assistant School Medical Officers	... M. A. Mackenzie, M.B., Ch.B., D.P.H.	
	W. J. Melvor, M.B., Ch.B., D.P.H.	
	Mary A. Thomas, M.B., Ch.B., D.P.H.	
	Robert J. Clarke, M.B., Ch.B., D.P.H.	
	Gladys Wilkinson, M.R.C.S., L.R.C.P.	
County Analyst	... S. Ernest Melling, F.I.C.	
School Dental Surgeons	... H. R. Parry, L.D.S. (Senior Dentist)	
	S. O. Stewart, L.D.S.	
	L. N. Alley, L.D.S.	
	A. F. Hely, L.D.S.	
	F. Jones, L.D.S.	
	Fred L. Jones, L.D.S.	
	E. S. Poulter, L.D.S.	
	N. A. James, L.D.S.	
School Oculists (Part-time)	... W. Dunlop Hamilton, M.B., B.Ch.,	
		D.O.M.S.
	C. Jacobs, M.D., M.B., B.S.	
County Sanitary Officer	... F. Humphries.	
County Veterinary Officer—		
	A. B. Kerr, M.R.C.V.S., D.V.S.M.	... Tel. 119 Christleton.
District Veterinary Officers—		
	Ed. Anthony Comer, M.R.C.V.S., D.V.S.M.	Tel. 1578 Chester.
	J. B. Garside, M.R.C.V.S.	... „ 68 Wilmslow.
	D. Lloyd-Jones, M.R.C.V.S., D.V.S.M.	... „ 10 Tattenhall.
	Geo. McKee, M.R.C.V.S., D.V.S.M.	... „ 5119 Nantwich.
	Jas. T. Taylor, M.R.C.V.S.	... „ 37 Winsford.

CONSULTANTS FOR PUERPERAL CASES.

CHESTER	... J. Gardiner Wigley, F.R.C.S., 40, King Street, Chester. (Tel. Chester 938).
MANCHESTER	... C. Philip Brentnall, M.D., 18, St. John Street, Manchester. (Tel. Blackfriars 9984); and "Riversdale," Fielden Park, West Didsbury. (Tel. Didsbury 3762).
	Gordon Fitzgerald, M.D., Northern Assurance Buildings, Albert Square, Manchester. (Tel. Blackfriars 6458-9).
	F. H. Lacey, M.D., 16, St. John Street, Manchester. (Tels. Blackfriars 1500 and Didsbury 3092).
	J. W. A. Hunter, M.D., 12, St. John Street, Manchester. (Tels. Central 3615 and 2130 and Rusholme 333).
LIVERPOOL	... Percy Malpas, F.R.C.S., 31, Rodney Street, Liverpool, and 110, Liverpool Road, Crosby. (Tel. Royal 4670. After 6 p.m., Crosby 1311).
	A. Leyland Robinson, F.R.C.S., 57, Rodney Street, Liverpool. (Tel. Royal 61).
STOKE	... T. H. Richmond, F.R.C.S., 3, The Villas, off London Road, Stoke-on-Trent. (Tel. Hanley 48341).

Health Visitors (39),

<i>Name.</i>	<i>Approximate District.</i>	<i>Maternity Centres. Tuberculosis Dispensaries. School Clinics.</i>
Barker, G.	... Mottram, Broadbottom, Tintwistle	Hollingworth Centre.
Bell, M.	... Wilmslow, Alderley Edge, Mobberley, Woodford, Mottram, Styal	Wilmslow Centre
Bird, B.	... Runcorn, Weston Point, Weston ...	Runcorn Centre (2 days) Runcorn Dispensary. Runcorn School Clinic (daily).
Bradley, C.	... Bredbury, Romiley, Woodley ...	Bredbury Centre. Hyde Dispensary.
Carr, K. E.	... Bebington, Bromborough, New Ferry, Thornton, Willaston, Burton, Neston	Neston Centre. Birkenhead Dispensary.
Charnley, J.	... Runcorn, Halton	Runcorn Dispensary Runcorn Centre (2 days). Runcorn Clinic (daily)
Commins, C.	... Poynton, Bollington, Rainow, Prestbury, Sutton, Wincle, Adlington, Macclesfield Forest	Bollington Centre.
Dickson, S.	... Marple, Disley, Yeardsley, Kettleshulme	Marple Centre. Disley Centre. Whaley Bridge Centre. Compstall Centre.
Dobie, A.	... Guilden Sutton, Barrow, Ashton, Tarvin, Kelsall, Duddon, Utkinton, Tarporley, Tiverton, Tilston, Mouldsworth	Chester Castle Centre Utkinton Centre. Tarporley Centre.
Edwards, Ellen	... Altrincham, Timperley, Dunham Massey, Rostherne, Ashley, Bowdon, Ringway	Altrincham Dispensary. Altrincham Clinic.
Finger, G. F.	... Congleton, Buglawton, Astbury, Odd Rode, Rode Heath, Church Lawton	Congleton Centre. Congleton Dispensary. Ante Natal Clinic.
Fox, M. E.	... Middlewich, Cranage, Byley, Wimboldsley, Tetton	Middlewich Centre.
Hanson, A.	... Stalybridge Borough, Romiley	Romiley Centre.
Johnson, G. W.	... Winsford... ..	Winsford Centre and Clinic and Dispensary
Kidd, W.	... Northwich, Winnington, Marston, Acton, Crowton, Barnton, Wincham	Northwich Dispensary. Northwich School Clinic (daily). Owley Wood Centre.
Kidd, E.	... Knutsford, Mere, Tabley, Lostock, Rudheath, Pickmere	Northwich Clinic & Centre Knutsford Clinic.
Lea, D.	... Nantwich, Calveley, Worleston, Church Minshull, Wettenhall, Warmingham, Acton	Nantwich Centre. Nantwich School Clinic (daily).
Lunt, M.	... Ellesmere Port, Eastham, Childer Thornton, Great Sutton, Little Sutton	Ellesmere Port Dispensary. Do. School Clinic.
Marston, H.	... Hoole, Christleton, Waverton, Great Saughall, Backford, Mickle Trafford, Huxley, Hargrave, Tattenhall, Burwardsley, Harthill	Chester Dispensary. Hoole Centre and Ante Natal Clinic.

HEALTH VISITORS—*Continued.*

<i>Name.</i>	<i>Approximate District.</i>		<i>Maternity Centres.</i>
			<i>Tuberculosis Dispensaries.</i> <i>School Clinics.</i>
Meadows, R.	... Lymm, Warburton, Partington, Thelwall, High Legh		Lymm Centre. Lymm School Clinic
Merry, A.	... Willaston, Wistaston, Stapeley, Hatherton, Hankelow, Audlem, Buerton, Wrenbury, Bicker- ton, Cholmondeley, Bunbury, Shavington, Peckforton		
Middlehurst, E.	... Northwich ...		Northwich Centre.
Ollerenshaw, E.	... Dukinfield Borough		Dukinfield Centre (2 days)
Owen, Esme	... Sandbach, Wheelock, Hassall, Betchton, Smallwood, Brereton, Holmes Chapel		Sandbach Centre.
Owen, Elizabeth	... Hoylake, West Kirby, Meols, Greasby, Upton, Caldy, Thurstas- ton, Heswall, Barnston		Hoylake Centre. West Kirby Dispensary. Heswall Centre.
Percival, P.	... Haslington, Alsager, Weston, Bar- thomley, Wybunbury, Dodding- ton, Checkley		Crewe Dispensary
Ramsey, F. M.	... Northwich ...		Northwich Centre.
Rimmer, A. A.	... Runcorn, Clifton ...		Runcorn Centre. Runcorn Dispensary. Runcorn Clinic.
Ross, M.	... Ashton-on-Mersey, Sale, Carrington		Sale Centre (2 days) Sale Clinic.
Rushton, S.	... Dukinfield Borough ...		Dukinfield Centre (2 days).
Smith, A.	... Eccleston, Dodleston, Saughton, Rowton, Aldford, Handley, Farn- don, Pulford, Churton, Clutton, Hatton		
Spencer, M.	... Chelford, Henbury, Siddington, Gawsworth, Marton, North Rode, Swettenham, Goostrey, Ollerton, Withington, Eaton, Peover		Macclesfield Dispensary.
Taylor, E. S.	... Stockton Heath, Grappenhall, Moore, Daresbury, Appleton, Stretton, Preston Brook, Dutton, Whitley		Stockton Heath Centre. Grappenhall Centre.
Toft, D.	... Shocklach, Malpas, Tilston, Biek- ley, Cuddington, Wirswall, Marbury		Malpas Centre.
Turcan, C.	... Ince, Thornton, Dunham, Alvanley, Frodsham, Norley, Kingsley		New Ferry Clinic (daily).
Ward, S.	... Cheadle, Gatley, Cheadle Hulme, Northenden		Cheadle Centre. Cheadle Hulme Centre.
Wells, G.	... Winsford, Over, Wharton, Hart- ford, Davenham, Moulton, Cudd- ington, Delamere, Little Budworth		Northwich Dispensary. Northwich Clinic.
Wilkinson, M.	... Hazel Grove, Bramhall, Handforth, Pownall Green		Hazel Grove Centre. Stockport Dispensary.
Wingfield, H.	... Sale ...		Sale Centre (2 days).

Dental Nurses.

Babington, D.
 Jones, Ethel
 Jones, S.
 Rees, G.

Thompson, D.
 Toft, Ethel
 Watts, G. M.
 Winnell, M.

Superintendent Clerk

... ..

Vincent O'Connor.

Offices—24, Nicholas Street, Chester.

Telephone Nos. 2305 & 2306.

List of Public Vaccinators and Vaccination Officers.

(Districts served are in brackets).

No. 1 (BUCKLOW) AREA.

Public Vaccinators—

- DR. BOWRING, Knutsford (Bexton, Knutsford, Marthall, Mere, Mobberley, Ollerton, Peover Inferior, Peover Superior, Pickmere, Plumbley, Rostherne, Tabley Inferior, Tabley Superior, Tatton, Toft).
- DR. BYERS, Wilmslow (Alderley Edge, Bollinfee, Northen Etchells, Styal, Wilmslow).
- DR. COOPER, Altrincham (Altrincham, Ashley, Bowdon, Dunham Massey, Hale, Ringway, Timperley).
- DR. NICHOLSON, Sale (Ashton-upon-Mersey, Baguley, Carrington, Northenden, Sale).
- DR. PRETSELL, Lymm (Agden, Aston-by-Budworth, Bollington, High Legh, Lymm, Millington, Partington, Warburton).

Vaccination Officers—

- HAROLD T. MERCER, 10, Springfield Road, Sale (Ashton-upon-Mersey, Baguley, Carrington, Northenden, Sale).
- THOMAS H. PETERS, Moor Lane, Wilmslow (Alderley Edge, Bollinfee, Northen Etchells, Styal, Wilmslow).
- THOS. PRITCHARD, 5, Springfield Road, Altrincham (Altrincham, Ashley, Bowdon, Dunham Massey, Hale, Ringway, Timperley).
- MRS. SHAW, 23, St. John's Avenue, Knutsford (Bexton, Knutsford, Marthall, Mere, Mobberley, Ollerton, Peover Inferior, Peover Superior, Pickmere, Plumbley, Rostherne, Tabley Inferior, Tabley Superior, Tatton, Toft).
- FRANK WILSON, Arbuthnot, Booth Hill, Lymm (Agden, Ashton-by-Budworth, Bollington, High Legh, Lymm, Millington, Partington, Warburton).

No. 2 (MACCLESFIELD AND CONGLETON) AREA.

Public Vaccinators—

- DR. ALLAN, Whaley Bridge (Disley, Kettleshulme, Taxal, Yeardsley-cum-Whaley).
- DR. BENNETT, Sandbach (Alsager, Arclid, Betchton, Bradwall, Church Lawton, Elton, Hassall, Moston, Odd Rode, Sandbach, Smallwood, Tetton, Wheelock).
- DR. COUPE, Bollington (Bollington, Butley, Fallibroome, Mottram St. Andrew, Newton, Prestbury, Lyme Handley, Pott Shrigley, Tytherington, Upton).
- DR. DAVIDSON, Congleton (Bosley, Eaton, Marton, North Rode).
- DR. FELLOWS, Poynton (Adlington, Poynton, Woodford).
- DR. FERN, Congleton (Congleton, Buglawton, Hulme Walfield, Moreton, Newbold Astbury, Somerford, Somerford Booths).
- DR. J. B. HUGHES, Macclesfield (Macclesfield Borough).

- DR. PICTON, Holmes Chapel (Blackden, Brereton, Church Hulme, Cotton, Cranage, Davenport, Goostrey, Kermincham, Leese, Swettenham, Twemlow).
- DR. R. PROUDFOOT, Macclesfield (Gawsworth, Hurdsfield, Macclesfield Forest, Rainow, Sutton, Wildboardclough, Wincle).
- DR. A. H. SHEPARD,, Chelford (Birtles, Capesthorne, Chelford, Chorley, Great Warford, Henbury, Lower Withington, Nether Alderley, Old Withington, Siddington, Snelson).

Vaccination Officers—

- MAJOR A. BEVAN, 8, Park View, Congleton (Congleton, Buglawton, Hulme Walfield, Moreton, Newbold Astbury, Somerford, Somerford Booths).
- F. W. JONES, Cumberland Street, Macclesfield (Bosley, Eaton, Gawsworth, Henbury, Macclesfield Forest, Marton, North Rode, Siddington, Sutton, Wildboardclough, Wincle).
- ARTHUR MILLWARD, 84, Prestbury Road, Macclesfield (Macclesfield Borough (part)).
- JAMES REDFERN, Congleton Road, Sandbach (Alsager, Arclid, Betchton, Bradwall, Church Lawton, Elton, Hassall, Moston, Odd Rode, Sandbach, Smallwood, Tetton, Wheelock).
- PERCY RICHARDSON, Middlewich Road, Holmes Chapel (Blackden, Brereton, Church Hulme, Cotton, Cranage, Davenport,, Goostrey, Kermincham, Leese, Swettenham, Twemlow).
- G. B. STURLEY, 84, Prestbury Road, Macclesfield (Adlington, Birtles, Bollington, Butley, Capesthorne, Chelford, Chorley, Disley, Fallibroome, Great Warford, Hurdsfield, Kettleshulme, Lower Withington, Lyme Handley, Macclesfield Borough (part), Mottram St. Andrew, Nether Alderley, Newton, Old Withington, Over Alderley, Pott Shrigley, Poynton, Prestbury, Rainow, Snelson, Taxal, Tytherington, Upton, Woodford, Yeardsley-cum-Whaley).

No. 3 (NANTWICH) AREA.

Public Vaccinators—

- DR. FITZGERALD ARTHUR, Tarporley (Alpraham, Bickerton, Bulkeley, Bunbury, Calvey, Egerton, Haughton, Peckforton, Ridley, Spurstow, Wardle, Wettenhall).
- DR. W. L. ENGLISH, High Street, Haslington, Crewe (Barthomley, Basford, Crewe Rural, Haslington, Weston).
- DR. LEIGH, Malpas (Agden, Bickley, Bradley, Chidlow, Chorlton, Cuddington, Duckington, Edge, Hampton, Larkton, Macefen, Malpas, Newton, Oldcastle, Overton, Stockton, Threapwood, Tushingham, Wigland, Wyclough).
- DR. LONEY, Wrenbury (Baddiley, Broomhall, Cholmondeley, Chorley, Dodcot-cum-Wilkesley (part), Marbury, Newhall (part), Norbury, Sound, Wirswall, Woodcott, Wrenbury).
- DR. J. MUNRO, Nantwich (Acton, Aston-juxtra-Mondrum, Badlington, Bartherton, Brindley, Burland, Cholmondeston, Edlaston, Faddiley, Henhull, Hurleston, Nantwich, Poole, Stoke, Willaston, Worleston).

- DR. U. G. MURRAY, Crewe (Crewe M.B. (part), Rope, Shavington, Wistaston).
- DR. G. C. THORNTON, Audlem (Audlem, Buerton, Coole Pilate, Dodcot-cum-Wilkesley (part), Hankelow, Newhall (part)).
- DR. R. T. TURNER, Nantwich (Austerson, Blackenhall, Bridgemere, Checkley-cum-Wrinehill, Chorlton, Doddington, Hatherton, Hough, Hunsterson, Lea, Stapeley, Walgherton, Wybunbury).
- DR. J. WORTHINGTON, Crewe (Church Coppenhall, Church Minshull, Crewe M.B. (part), Leighton, Minshull Vernon, Warmingham, Woolstanwood).

Vaccination Officers—

- F. E. DAVENPORT, 58, The Crofts, Nantwich (Agden, Alraham, Audlem, Bickerton, Bickley, Bradley, Broomhall, Buerton, Bulkeley, Bunbury, Calveley, Chidlow, Coole Pilate, Cholmondeley, Chorley, Chorlton, Dodcot-cum-Wilkesley, Duckington, Edge, Egerton, Hampton, Hankelow, Haughton, Larkton, Macefen, Malpas, Marbury, Newhall, Newton, Norbury, Oldcastle, Overton, Peckforton, Ridley, Sound, Spurstow, Stockton, Threapwood, Tushingham, Wardle, Wettenhall, Wigland, Wirswall, Woodcott, Wrenbury-cum-Frith, Wyclough).
- A. W. DAVIES, 21, Pillory Street, Nantwich (Acton, Aston-juxtra-Mondrum, Austerson, Baddiley, Baddington, Bartherton, Blakenhall, Bridgemere, Brindley, Burland, Checkley-cum-Wrinehill, Cholmondeston, Chorlton, Church Minshull, Doddington, Edlaston, Faddiley, Hatherton, Henhull, Hough, Hunsterson, Hurleston, Lea, Nantwich U.D., Poole, Rope, Stapeley, Willaston, Stoke, Walgherton, Worleston, Wybunbury).
- CHARLES GRIFFITHS, 256, Nantwich Road, Crewe (Barthomley, Basford, Church Coppenhall, Leighton, Haslington, Minshull Vernon, Shavington-cum-Gresty, Warmingham, Weston, Wistaston, Woolstanwood).
- R. H. LEWIS, Victoria Chambers, Heath Street, Crewe (Crewe M.B.)

No. 4 (NORTHWICH AND RUNCORN) AREA.

Public Vaccinators—

- DR. BOWER, Stretton (Acton Grange, Antrobus, Appleton, Bartington, Budworth, Crowley, Daresbury, Dutton, Grapenhall, Hatton, Keckwick, Latchford Without, Moore, Newton-by-Daresbury, Preston-o'th-Hill, Seven Oaks, Stockton Heath, Stretton, Thelwall, Walton Inferior, Walton Superior, Whitley Inferior, Whitley Superior).
- DR. J. W. CRAW, Northwich (Allostock, Davenham, Leftwich, Lostock Gralam, Nether Peover, Northwich (part), Winnington).
- DR. CULLEN, Runcorn (Aston, Aston Grange, Clifton, Halton, Norton, Runcorn U.D., Stockham, Sutton, Weston).
- DR. J. B. FULTON, Northwich (Anderton, Cogshall, Comberbach, Marbury Marston, Northwich (part), Wincham).
- DR. JAMES, The Knoll, Frodsham (Alvanley, Frodsham, Frodsham Lordship, Helsby, Kingsley, Kingswood, Manley, Newton-by-Frodsham, Norley).

- DR. W. N. LEAK, Winsford (Clive, Darnhall, Eaton, Little Budworth, Moulton, Marton, Over, Wharton).
- DR. S. L. MELVILLE, Middlewich (Bostock, Byley, Kinderton, Lach Dennis, Middlewich, Rudheath, Sproston, Stanthorne, Whatcroft, Wimboldsley).
- DR. W. G. SHAW, Weaverham (Cuddington, Delamere, Eddisbury, Hartford, Little Leigh, Northwich (part), Oakmere, Weaverham).

Vaccination Officers—

- J. CARTER, Middlewich (Bostock, Byley, Davenham, Kinderton, Lach Dennis, Middlewich, Rudheath, Sproston, Stanthorne, Whatcroft, Wimboldsley).
- JOHN HOLLAND, Main Street, Frodsham (Alvanley, Frodsham, Frodsham Lordship, Helsby, Kingsley, Kingswood, Manley, Newton-by-Frodsham, Norley).
- A. J. MASSEY, Fairfield Road, Stockton Heath (Acton Grange, Antrobus, Appleton, Bartington, Budworth, Crowley, Daresbury, Dutton, Grappenhall, Hatton, Keckwick, Latchford Without, Moore, Newton-by-Daresbury, Preston-o'th-Hill, Seven Oaks, Stockton Heath, Stretton, Thelwall, Walton Inferior, Walton Superior, Whitley Inferior, Whitley Superior).
- FRED MOORE, Grange Lane, Winsford (Clive, Darnhall, Eaton, Little Budworth, Marton, Moulton, Over, Wharton).
- F. T. MORGAN, (Acton, Barnton, Crowton, Cuddington, Delamere, Eddisbury, Hartford, Little Leigh, Northwich (part), Oakmere, Weaverham).
- JAS. PEARSON, County Council Offices, Waterloo Road, Runcorn (Aston, Aston Grange, Clifton, Halton, Norton, Runcorn U.D., Stockham, Sutton, Weston).
- STANLEY S. TREVOR, Winnington Hill, Northwich (Allostock, Anderton, Cogshall, Comberbach, Leftwich, Lostock Gralam, Marbury, Marston, Nether Peover, Northwich (part), Wincham, Winnington).

No. 5 (CHESTER AND TARVIN) AREA.

Public Vaccinators—

- DR. CAMPBELL, Tarporley (Beeston, Eaton, Rushton, Tarporley, Tilston Fearnall, Tiverton, Utkinton).
- DR. WM. CUMMINS, Tattenhall, Chester (Aldersley, Broxton, Burwardsley, Chowley, Clutton, Golborn Bellow, Golborn David, Handley, Harthill, Hatton, Newton-by-Tattenhall, Tattenhall).
- DR. J. FIELDING, Hill House, Kelsall (Ashton, Barrow, Bruen Stapleford, Burton, Cotton Abbots, Cotton Edmunds, Clotton Hoofield, Duddon, Foulk Stapleford, Guilden Sutton, Hockenhull, Horton-cum-Peel, Huntington, Huxley, Iddenshall, Kelsall, Mouldsworth, Pryors Hayes, Rowton, Saughton, Waverton, Willington).
- DR. W. PARKER, Farndon, nr. Chester (Aldford, Barton, Buer-ton, Caldecott, Carden, Churton-by-Aldford, Churton-by-Farndon, Churton Heath, Coddington, Crewe-by-Farndon, Edgerley, Farndon, Grafton, Horton-by-Malpas, King's Marsh, Lea Newbold, Shocklach, Shocklach Church, Shocklach Oviatt, Stretton, Tilston).

DR. W. J. RUSSELL, Hoole (Bache, Backford, Blacon-cum-Crabwall, Bridge Trafford, Capenhurst, Caughall, Chester Castle or Gloverstone, Chorlton-by-Backford, Christleton, Claverton, Croughton, Dodleston, Dunham Hill, Eaton, Eccleston, Elton, Great Boughton, Great Saughall, Hapsford, Hoole, Hoole Village, Lea-by-Backford, Ledsham, Littleton, Little Saughall, Little Stanney, Lower Kinnerton, Marlston-cum-Lache, Mickle Trafford, Mollington, Moston, Newton-by-Chester, Picton, Poulton, Pulford, Shotwick, Shotwick Park, Stoke, Thornton-le-Moors,, Upton-by-Chester, Wervin, Wimbolds Trafford, Woodbank).

Vaccination Officers—

MR. R. E. BLYTHE, Tattenhall, near Chester (Aldersey, Aldford, Ashton, Barrow, Barton, Beeston, Broxton, Bruen Stapleford, Buerton, Burton, Burwardsley, Caldecott, Carden, Chowley, Churton Heath, Churton-by-Aldford, Churton-by-Farndon, Clotton Hoofield, Clutton, Coddington, Cotton Abbots, Cotton Edmunds, Crewe-by-Farndon, Duddon, Eaton, Edgerley, Farndon, Foulk Stapleford, Golborn Bellow, Golborn David, Guilden Sutton, Grafton, Handley, Harthill, Hatton, Hockenhull, Horton-cum-Peel, Horton-by-Malpas, Huntington, Huxley, Iddenshall, Kelsall, King's Marsh, Lea Newbold, Mouldsworth, Newton-by-Tattenhall, Pryor's Hayes, Rowton, Rushton, Saughton, Shocklach Church, Shocklach Oviatt, Stretton, Tarporley, Tarvin, Tattenhall, Tilston, Tilston Fearnall, Tiverton, Utkinton, Waverton, Willington).

MR. A. WIGGLESWORTH, 11, Pickering Street, Hoole, Chester (Bache, Backford, Blacon-cum-Crabwall, Bridge Trafford, Capenhurst, Caughall, Chester Castle or Gloverstone, Christleton, Chorlton-by-Backford, Claverton, Croughton, Dodleston, Dunham Hill, Eaton, Eccleston, Elton, Great Boughton, Great Saughall, Hapsford, Hoole, Hoole Village, Lea-by-Backford, Ledsham, Littleton, Little Saughall, Little Stanney, Lower Kinnerton, Marlston-cum-Lache, Mickle Trafford, Mollington, Moston, Newton-by-Chester, Picton, Poulton, Pulford, Shotwick, Shotwick Park, Stoke, Thornton-le-Moors, Upton-by-Chester, Wervin, Wimbolds Trafford, Woodbank).

No. 6 (WIRRAL) AREA.

Public Vaccinators—

DR. BICKNELL, West Kirby (Hoylake Urban District).
 DR. I. W. COWEN, Bebington (Bebington Urban District).
 DR. GRANT, Neston (Neston and Wirral Urban District).
 DR. GERRARD, Ellesmere Port (Ellesmere Port Urban District).

Vaccination Officers—

J. R. BIRD, 40, Church Road, Hoylake (Arrowe, Caldy, Frankby, Grange, Greasby, Hoylake, Irby, Saughall Massie, Thurston, Upton, Woodchurch).
 A. CLOUGH, Bradley's Central Buildings, Station Road, Ellesmere Port (Childer Thornton, Eastham, Ellesmere Port, Great Sutton, Hooton, Ledsham, Little Sutton).
 W. ROBERTS, Hinderton Road, Neston (Barnston, Bidston-cum-Ford, Burton, Gayton, Heswall, Ness, Neston, Noctorum,, Pensby, Puddington, Raby, Thornton Hough, Willaston).

G. TOMLINSON, 9, Rocklands Avenue, Bebington (Bebington, Bromborough, Brimstage, Spital, Storeton).

No. 7 (STALYBRIDGE AND DUKINFELD) AREA.

Public Vaccinators—

DR. MACFIE, Dukinfield (whole of Dukinfield).

DR. TALBOT, Mottram (Hattersley, Hollingworth, Mottram, Tintwistle).

DR. W. E. C. THOMAS, Stalybridge (whole of Stalybridge, Matley).

Vaccination Officers—

JOHN BRODERICK, Fern Cottages, Mottram (Hattersley, Hollingworth, Mottram, Tintwistle).

GEORGE FLINT, Town Hall, Stalybridge (Stalybridge, Matley).

MISS A. HEWITT, Town Hall, Dukinfield (Dukinfield).

No. 8 (HYDE AND CHEADLE) AREA.

Public Vaccinators—

DR. CANT, Woodley (Bredbury (whole of), Compstall, Romiley).

DR. GODSON, Cheadle (Cheadle, Etchells, Handforth, Stockport).

DR. JACKSON, Marple (Marple (whole of)).

DR. T. MOORE, Hazel Grove (Hazel Grove and Bramhall).

DR. PATERSON, Hyde (Hyde).

Vaccination Officers—

F. ARDERN, Council Offices, Hazel Grove (Hazel Grove and Bramhall).

W. H. BROWN, 113, Bennett Street, Newton (Hyde (former Parishes of Godley and Newton)).

J. H. JOHNSON, Midland Bank Chambers, Cheadle, near Stockport (Cheadle, Etchells, Handforth).

C. S. MARLOW, Council Offices, Marple (Marple).

H. WHALLEY, Public Assistance Offices, Shaw Heath, Stockport (Bredbury, Compstall, Hyde (excluding former Parishes of Godley and Newton), Romiley).

POOR LAW INSTITUTIONS.

Public Vaccinators—

Bucklow : DR. H. BOWRING, Knutsford.

Congleton : DR. HENDERSON, Sandbach.

Macclesfield : DR. J. B. HUGHES, Macclesfield.

Nantwich : DR. MUNRO, Nantwich.

Northwich : DR. J. W. CRAW, Northwich.

Runcorn : DR. BOWER, Stretton.

Tarvin : DR. H. L. W. WOODROFFE, Chester.

Wirral : DR. J. B. YEOMAN, Neston.

Poor Law Medical Out-Relief.

No. 1 (BUCKLOW) AREA.

District No. 1 (Altrincham)—Altrincham (21356), Bowdon (3285), Dunham Massey (1694), Hale (10667), Timperley (7080).

Medical Officer—Arthur Torkington Blease, of Altrincham.

District No. 2 (Knutsford South)—Bexton (132), Marthall (626), Ollerton (274), Peover Inferior (100), Peover Superior (617), Plumbley (459), Toft (214).

Medical Officer—Harold Bowring, of Knutsford.

District No. 3 (Knutsford North)—Agden (85), Aston-by-Budworth (364), Bollington (174), High Legh (688), Knutsford (5415), Mere (379), Pickmere (341), Rostherne (284), Tabley Inferior (110), Tabley Superior (469), Tatton (61), Millington (258).

Medical Officer—Harold Bowring, of Knutsford.

District No. 4 (Lymm)—Lymm (5639), Partington (816), Warburton (354).

Medical Officer—Thomas Pretsell, of Lymm.

District No. 5 (Sale)—Carrington (504), Sale (28071).

Medical Officer—William Nicholson, of Sale.

District No. 6 (Wilmslow)—Ashley (359), Ringway (602), Styal (1336), Wilmslow (9760), Alderley Edge (3145), Mobberley (1735).

Medical Officer—Alfred Byers, of Wilmslow.

No. 2 (MACCLESFIELD AND CONGLETON) AREA.

District No. 1 (Macclesfield)—Macclesfield Town (34905).

Medical Officer—John Brierley Hughes, of Macclesfield.

District No. 2 (Sutton and Rainow)—Sutton (1426), Rainow (1109), Wildboarclough (162), Wincle (208), Macclesfield Forest (125), Hurdsfield (441), Gawsword (709).

Medical Officer—Robert Proudfoot, of Macclesfield.

District No. 3 (Alderley)—Alderley Over (333), Alderley Nether (757), Capesthorpe (97), Chelford (341), Birtles (50), Chorley (401), Henbury (352), Warford Great (900), Withington Old (125), Withington Lower (531), Snelson (200), Siddington (344).

Medical Officer—Arthur Harold Shepard, of Chelford, near Crewe.

District No. 4 (Bollington)—Bollington (5027), Butley (554), Fallibroome (72), Mottram St. Andrew (444), Newton (82), Prestbury (487), Lyme Handley (211), Pott Shrigley (441), Tytherington (318), Upton (278).

Medical Officer—Geoffrey Coope, of Bollington, near Macclesfield.

District No. 5 (Eaton and Marton)—Bosley (359), Eaton (325), Marton (249), North Rode (268).

Medical Officer—Richard Baring Davidson, of Congleton.

District No. 6 (Poynton)—Adlington (689), Poynton (3944), Woodford (801).

Medical Officer—Fredk. McFarlane Fellows, of Poynton, near Stockport.

District No. 7 (Whaley Bridge)—Kettleshulme (349), Taxal (679), Yeardsley-cum-Whaley (1745), Disley (3212).

Medical Officer—Fred Garnet Allan, of Whaley Bridge, via Stockport.

District No. 8 (Congleton)—Buglawton (1651), Congleton (12885), Hulme Whalfield (80), Moreton (130), Newbold Astbury (571), Somerford (102), Somerford Booths (162).

Medical Officer—Alfred James Pirie, of Congleton.

District No. 9 (Sandbach)—Arclid (306), Betchton (614), Bradwall (1307), Elton (448), Hassall (318), Moston (134), Sandbach (6411), Smallwood (615), Tetton (141), Wheelock (756).

Medical Officer—Andrew Henderson, of Sandbach.

District No. 10 (Alsager)—Alsager (2852), Church Lawton (874), Odd Rode (3307).

Medical Officer—Matthew James Hazlett Sayers, of Alsager.

District No. 11 (Church Hulme)—Blackden (121), Brereton (469), Church Hulme (1143), Cotton (33), Cranage (399), Davenport (81), Goostrey (508), Kermincham (129), Leese (119), Swettenham (150), Twemlow (107).

Medical Officer—Lionel James Picton, of Holmes Chapel.

No. 3 (NANTWICH) AREA.

District No. 1 (Audlem)—Audlem (1346), Buerton (421), Coole Pilate (52), Dodcote C. W. (part) (450), Hankelow (175), Newhall (part) (200).

Medical Officer—Gifford Campion Thornton, of Audlem, Crewe.

District No. 2 (Bunbury)—Alraham (436), Bickerton (259), Bulkeley (120), Bunbury (882), Calveley (270), Egerton (101), Haughton (150), Peckforton (161), Ridley (160), Spurstow (333), Wardle (140), Wettehall (186).

Medical Officer—Maurice Marshall Fitzgerald Arthur, of Bunbury. Tarporey.

District No. 3 (Crewe N.)—Church Coppenhall (996), Leighton (141), Minshull Vernon (324), Warmingham (215), Woolstanwood (137), Crewe M. B. (part) (25569).

Medical Officer—James Worthington, of Crewe.

District No. 4 (Crewe S.)—Rope (92), Shavington (2303), Wistaston (1504), Crewe M. B. (part) (20500).

Medical Officer—William George Murray, of Crewe.

District No. 5 (Haslington)—Barthomley (257), Basford (177), Crewe (Rural) (363), Haslington (2633), Weston (490).

Medical Officer—Wm. Larmour English, of Crewe.

District No. 6 (Nantwich)—Acton (206), Aston-j-M. (139), Baddington (112), Batherton (53), Brindley (187), Burland (595), Cholmondeston (158), Edleston (60), Faddiley (211), Henhull (123), Hurleston (110), Nantwich U. D. (7133), Poole (114), Stoke (213), Willaston (2834), Worleston (548), Church Minshull (265).

Medical Officer—John Douglas Ross Munro, of Nantwich.

District No. 7 (Wrenbury)—Baddiley (219), Broomhall (184), Chorley (162), Cholmondeley (278), Dodcote C. W. (part) (97), Marbury (282), Norbury (271), Wirswall (158), Newhall (part) (445), Sound (243), Woodcott (18), Wrenbury (589).

Medical Officer—Ralph Edward Loney, of Wrenbury, Nantwich.

District No. 8 (Wybunbury)—Austerson (50), Blakenhall (178), Bridgemere (149), Checkley C. W. (235), Chorlton (76), Doddington (66), Hatherton (287), Hough (299), Hunsterson (175), Lea (37), Stapelay (634), Walgherton (159), Wybunbury (644).

Medical Officer—Richard Timmis Turner, of Nantwich.

District No. 9 (Malpas)—Agden (75), Bickley (302), Bradley (136), Chidlow (13), Chorlton (90), Cuddington (236), Duckington (65), Edge (238), Hampton (366), Larkton (37), Macefen (65), Malpas (1101), Newton (13), Oldcastle (84), Overton (98), Stockton (20), Threapwood (279), Tushingham (234), Wigland (104), Wychough (16).

Medical Officer—Albert Leigh, of Malpas.

No. 4 (NORTHWICH AND RUNCORN) AREA.

District No. 1 (Northwich)—Anderton (329), Cogshall (93), Comberbach (388), Marbury (37), Marston (530), Northwich (part) (10285), Wincham (1003).

Medical Officer—James Boyd Fulton, of Northwich.

District No. 2 (Northwich)—Allostock (436), Davenham (644), Leftwich (1021), Lostock Gralam (1928), Nether Peover (200), Northwich (part) (5729), Winnington (1268).

Medical Officer—John Woodruff Craw, of Northwich.

District No. 3 (Winsford)—Clive (178), Eaton (75), Moulton (1220), Winsford U. D. (part) (6495).

Medical Officer—Walter Norman Leak, of Winsford.

District No. 4 (Over)—Darnhall (210), Little Budworth (568), Marton (597), Winsford U. D. (part) (4503).

Medical Officer—George Okell, of Winsford.

District No. 5 (Weaverham)—Acton (516), Barnton (3198), Crowton (474), Cuddington (698), Delamere (713), Eddisbury (402), Hartford (1420), Little Leigh (422), Northwich U. D. (part) (2718), Oakmere (425), Weaverham (3179).

Medical Officer—William Geoffrey Shaw, of Northwich.

District No. 6 (Middlewich)—Bostock (139), Byley (146), Kinderton (432), Lach Dennis (155), Middlewich (5458), Rudheath (2733), Sproston (167), Stanthorne (290), Whatcroft (119), Wimboldsley (145).

Medical Officer—Samuel Lightfoot Melville, of Middlewich.

District No. 7 (Runcorn)—Aston (220), Aston Grange (36), Clifton (178), Halton (1694), Norton (part) (184), Stockham (21), Sutton (453), Weston (3783), Runcorn (Urban District) (18127).

Medical Officer (temporary)—Jerome B. Murphy, of Runcorn.

District No. 8 (Budworth)—Acton Grange (part) (110), Antrobus (380), Appleton (1196), Bartington (64), Budworth (447), Crowley (139), Daresbury (86), Dutton (454), Grappenhall (part) (2236), Hatton (297), Keckwick (54), Latchford Without (1266), Moore (part) (475), Newton-by-Daresbury (179), Preston o'th' Hill (355), Seven Oaks (163), Stockton Heath (part) (4844), Stretton (371), Thelwall (part) (509), Walton Inferior (1027), Walton Superior (175), Whitley Inferior (171), Whitley Superior (339), Woolston-with-Martinscroft (part of).

Medical Officer—Harry Edward Bower, of Stretton, near Warrington.

District No. 9 (Frodsham)—Alvanley (309), Frodsham (3140), Frodsham Lordship (1563), Helsby (1960), Kingsley (1011), Kingswood (557), Manley (358), Newton by Frodsham (421), Norley (820).

Medical Officer—Harold Blades Ellison, of Frodsham.

No. 5 (TARVIN) AREA.

District No. 1 (Hoole)—Bache (62), Hoole (5889), Hoole Village (226), Newton (2581), Upton (2667), Moston (81), Chorlton (82), Backford (124), Croughton (21), Little Stanney (170), Thornton (part) (158), Elton (252), Hapsford (112), Picton (97), Wimbolds Trafford (73), Bridge Trafford (50), Mickle Trafford (263), Caughall (13), Stoke (101), Dunham (316), Huntington (144), Rowton (168), Waverton (479), Cotton Abbots (11), Cotton Edmunds (65), Barrow (910), Guilden Sutton (404), Great Boughton (2690), Littleton (336), Christleton (997), Wervin (103).

Medical Officer—William James Alexander Russell, of Hoole.

District No. 2 (Chester Rural)—Shotwick (73), Shotwick Park (26), Woodbank (88), Great Saughall (865), Little Saughall (304), Blacon (788), Kinnerton (113), Dodleston (247), Pulford (261), Poulton (119), Marlston (101), Claverton (—), Eccleston (291), Eaton (143), Castle (228), Capenhurst (157), Mollington (336), Lea (165), Ledsham (139), Little Sutton (part) (—), Burton (part) (—), Puddington (part) (312), Willaston (part) (20).

Medical Officer—

District No. 3 (Tarvin)—Ashton (430), Burton-by-Tarvin (41), Bruen Stapleford (114), Clotton Hoofield (382), Duddon (194), Foulk Stapleford (205), Hockenhull (21), Horton-cum-Peel (37), Huxley (253), Iddenshall (14), Kelsall (874), Mouldsworth (194), Pryors Hayes (11), Tarvin (1251), Willington (167).

Medical Officer—Charles Roberts Fielding, of Kelsall.

District No. 4 (Tattenhall)—Aldersey (92), Broxton (507), Burwardsley (298), Chowley (61), Handley (250), Harthill (95), Hatton (132), Newton-by-Tattenhall (198), Tattenhall (1008), Clutton (56), Golborne Bellow (103), Golborne David (84), Saughton (347).

Medical Officer—

District No. 5 (Farndon)—Aldford (347), Barton (103), Buerton (61), Caldecott (42), Carden (151), Churton-by-Aldford (191), Churton-by-Farndon (145), Churton Heath (15), Coddington (95), Crewe-by-Farndon (47), Edgerley (11), Farndon (560), Grafton (13), Horton-by-Malpas (120), King's Marsh (63), Lea Newbold (39), Stretton (79), Tilston (347), Shocklach Church (162), Shocklach Oviatt (149).

Medical Officer—William Parker, of Farndon.

District No. 6 (Tarporeley)—Beeston (268), Tarporeley U. D. (2452), Tilston Fearnall (146), Tiverton (525).

Medical Officer—Cecil Mackenzie Hewer, of Tarporeley.

No. 6 (WIRRAL) AREA.

District No. 1 (Bebington)—Urban District of Bebington (32034).

Medical Officer—John William Cowen, of Rock Ferry.

District No. 2 (Neston and Wirral)—Urban District of Neston (7934, and Wirral (9580).

Medical Officer—John Brown Yeoman, of Neston.

District No. 3 (Hoylake)—Urban District of Hoylake (19764).

Medical Officer—Arthur Bicknell, of West Kirby.

District No. 4 (Ellesmere Port)—Urban District of Ellesmere Port (22930).

Medical Officer—Robert Francis Gerrard, of Ellesmere Port.

No. 7 (STALYBRIDGE AND DUKINFIELD) AREA.

District No. 1 (Stalybridge)—Stalybridge (part of) (24831).

Medical Officer—Wm. John Hancock, of Stalybridge.

District No. 2 (Stalybridge)—Stalybridge (part of) (24831).

Medical Officer—William Ewart Chambers Thomas, of Stalybridge.

District No. 3 (Dukinfield)—Dukinfield (19311).

Medical Officer—John Macfie, of Dukinfield.

District No. 4 (Hattersley)—Hattersley (280), Matley (348), Hollingworth U. D. (2299), Mottram U. D. (2636), Tintwistle (1392).

Medical Officer—Ernest Talbot, of Mottram.

No. 8 (HYDE AND CHEADLE) AREA.

District No. 1 (Hyde)—Hyde (32075).

Medical Officer—Matthew Wallace Paterson, of Hyde.

District No. 2 (Cheadle)—Cheadle and Gatley U. D. (18473), Handforth U. D. (1031).

Medical Officer—John H. Godson, of Cheadle.

District No. 3 (Hazel Grove)—Hazel Grove and Bramhall U. D. (13300).

Medical Officer—Thomas Moore, of Hazel Grove.

District No. 4 (Bredbury)—Bredbury and Romiley U. D. (10876), Compstall U. D. (865).

Medical Officer—Fredk. Cant, of Woodley.

District No. 5 (Marple)—Marple U. D. (7389).

Medical Officer—James Jackson, of Marple.

REPORT OF THE Medical Officer of Health

For the Year ended December 31st, 1933.

Section I.-Area and Population.

Area.

The present acreage of the County is 623,510 acres.

Houses.

The number of structurally separate dwellings in the Administrative County in 1931 was 171,107, the number of private families being 175,237.

In the Table accompanying this Report particulars relating to population, area, births, deaths, &c., are given for each District separately and for the County as a whole. A brief reference may be made to the more important of these figures.

Population.

The population of the Administrative County, as enumerated at the Census of 1931, was 675,296. The estimate of the Registrar-General for 1933, is:—

6 Municipal Boroughs	168,570
32 Other Urban Districts	332,120
12 Rural Districts	181,060
	<hr/>
	681,750
	<hr/>

The Registrar-General in a Memorandum published in March, 1934, states:—

The annual distribution of his returns of births and deaths for the past year affords the Registrar-General an opportunity of directing the attention of Medical Officers of Health and others using the returns to some points upon which experience has shown that misunderstandings arise.

1. The numbers of live births, stillbirths and deaths are those **registered** (but excluding re-registrations) during the calendar year (i.e., **1st January—31st December, inclusive**) and are corrected for inward and outward transfers. They will differ, therefore, from uncorrected figures compiled locally either for the calendar year or for a period of fifty-two weeks.
2. The deaths are classified under the headings given in the Abridged List of Causes, as used in England and Wales and Northern Ireland (see page XXIV of the Manual of the International List of Causes of Death—1931). The attention of Medical Officers is drawn to the revised "Rules for the selection of one from two or more jointly stated causes of death" which appears on page XXVIII of the Manual. The classification of some deaths is modified in the light of fuller information obtained from the certifying practitioner in response to special inquiries, the principal subjects of these enquiries being indicated in a table published in the annual reports of the Registrar-General. This possible source of discrepancy between the returns of the Registrar-General and those compiled locally should be borne in mind particularly in regard to the causes of death dealt with in that table.

The Registrar-General's estimate of the resident population in each district is given herewith:—

Municipal Boroughs. (6)			Population at Census, 1931.	Population supplied by Registrar- General, 1933.	Area in Acres.
Congleton	...	...	12885	12960	2572
Crewe	...	...	46069	45340	2184
Dukinfield	...	...	19311	19250	1407
Hyde	...	...	32075	31710	3079
Macclesfield	...	...	34905	34780	3214
Stalybridge	...	...	24831	24530	3132
			170076	168570	15588

Urban Districts. (33)			Population at Census, 1931.	Population supplied by Registrar- General, 1933.	Area in Acres.
Alderley Edge	...	...	3145	3002	678
Alsager	...	...	2852	2913	2241
Altrincham	...	...	21356	21300	1425
Bebington	...	...	26740	33710	12235
Bollington	...	...	5027	4986	1291
Bowdon	...	...	3285	3262	850
Bredbury & Romiley	...	...	10876	11400	3990
Buglawton	...	...	1651	1635	2911
Cheadle & Gatley	...	...	18473	20110	5087
Compstall	...	...	865	842	903
Ellesmere Port	...	...	18911	24390	9143
Hale	...	...	10667	10950	1288
Handforth	...	...	1031	1253	1311
Hazel Grove	...	...	13300	14180	5447
Hollingworth	...	...	2299	2228	2086
Hoole	...	...	5889	6015	334
Hoylake	...	...	16631	19890	5933
Knutsford	...	...	5879	5721	1760
Lymm	...	...	5643	5724	4140
Marple	...	...	7389	7405	3055
Middlewich	...	...	5458	5481	1082
Mottram-in-Longdendale	...	...	2636	2569	1084
Nantwich	...	...	7133	7152	703
Neston	...	...	5676	8250	8497
Northwich	...	...	18732	18200	1398
Runcorn	...	...	18127	18050	1274
Sale	...	...	28071	29880	3629
Sandbach	...	...	6411	6416	2694
Tarporley	...	...	2452	2469	6195
Wilmslow	...	...	9760	10220	5090
Winsford	...	...	10998	10810	5785
Wirral	...	...	—	9940	5639
Yeardsley-cum-Whaley	...	...	1745	1767	1323
			299108	332120	110501
Rural Districts. (11)					
Bucklow	...	...	20115	22310	51239
Chester	...	...	16165	16980	32488
Congleton	...	...	13124	13530	40152
Disley	...	...	3212	3295	2466
Macclesfield	...	...	19161	19510	79494
Malpas	...	...	4283	4333	21405
Nantwich	...	...	26626	26400	98466
Northwich	...	...	26498	27370	54300
Runcorn	...	...	32725	32280	46921
Tarvin	...	...	13279	13050	56871
Tintwistle	...	...	2020	2002	13619
(Wirral	..	..	28904)		
			206112	181060	497421
Administrative County	...	...	675296	681750	623510

Rateable Value.

The rateable value of the Administrative County of Cheshire for County Rate purposes is £4,008,235. A penny rate over the whole County represents the sum of £15,614 (estimated).

Section II.-Births and Deaths.

Births.

The total number of births registered in the Administrative County during 1933 was 9,021 equal to a birth-rate of 13.2 per 1,000 of the estimated population. This is a slight decrease from last year, when the number of births was 9,209 giving a rate of 13.5. Comparative statistics are:—

England and Wales	14.4
118 Great Towns	14.4
132 Smaller Towns	14.5
London	13.2

The highest birth-rates were:—

Ellesmere Port U.D.	20.1
Runcorn U.D.	18.0
Compstall U.D.	17.8
Lymm U.D.	16.0

The lowest were:—

Hollingworth U.D.	6.2
Bowdon U.D.	8.5
Bollington U.D.	8.8
Mottram U.D.	8.9
Alderley Edge U.D.	8.9

The total number of illegitimate births in the Administrative County was 319 as against 322 in 1932.

Deaths.

The total number of deaths occurring in the Administrative County during 1933 was 8,253, equal to a death-rate of 12.0 per 1,000 of the estimated population. In 1932 the death-rate was 11.8. Comparative statistics are:—

England and Wales	12.3
118 Great Towns	12.2
132 Smaller Towns	11.0
London	12.2

The rates vary very considerably. The highest rates are recorded in the following districts:—

Mottram U.D.	15.9
Hyde M.B.	15.3
Handforth U.D.	15.1
Winsford U.D.	15.0
Stalybridge M.B.	14.7

The lowest death-rates were:—

Hoole U.D.	7.8
Wirral U.D.	8.0
Hollingworth U.D.	8.5
Buglawton U.D.	9.1

Births and Deaths.

The figures for the past 20 years are as follows:—

				Births.		Deaths.
1933	...	...	...	9,021	...	8,253
1932	...	...	...	9,209	...	8,055
1931	...	...	...	9,610	...	7,679
1930	...	...	...	9,976	...	7,519
1929	...	...	...	9,794	...	8,474
1928	...	...	...	9,968	...	7,520
1927	...	...	...	10,080	...	7,606
1926	...	...	...	10,333	...	7,368
1925	...	...	...	10,356	...	7,670
1924	...	...	...	10,687	...	7,601
1923	...	...	...	11,061	...	7,101
1922	...	...	...	11,395	...	7,691
1921	...	...	...	12,440	...	7,197
1920	...	...	...	14,075	...	7,246
1919	...	...	...	9,999	...	8,066
1918	...	...	...	9,838	...	8,903
1917	...	...	...	9,970	...	7,278
1916	...	...	...	11,537	...	7,730
1915	...	...	...	12,078	...	8,286
1914	...	...	...	13,019	...	7,816

Zymotic Diseases.

The total number of deaths from this special group of disease in the Administrative County during 1933 was 102, equal to a zymotic death-rate of .14 per 1,000 of the estimated population.

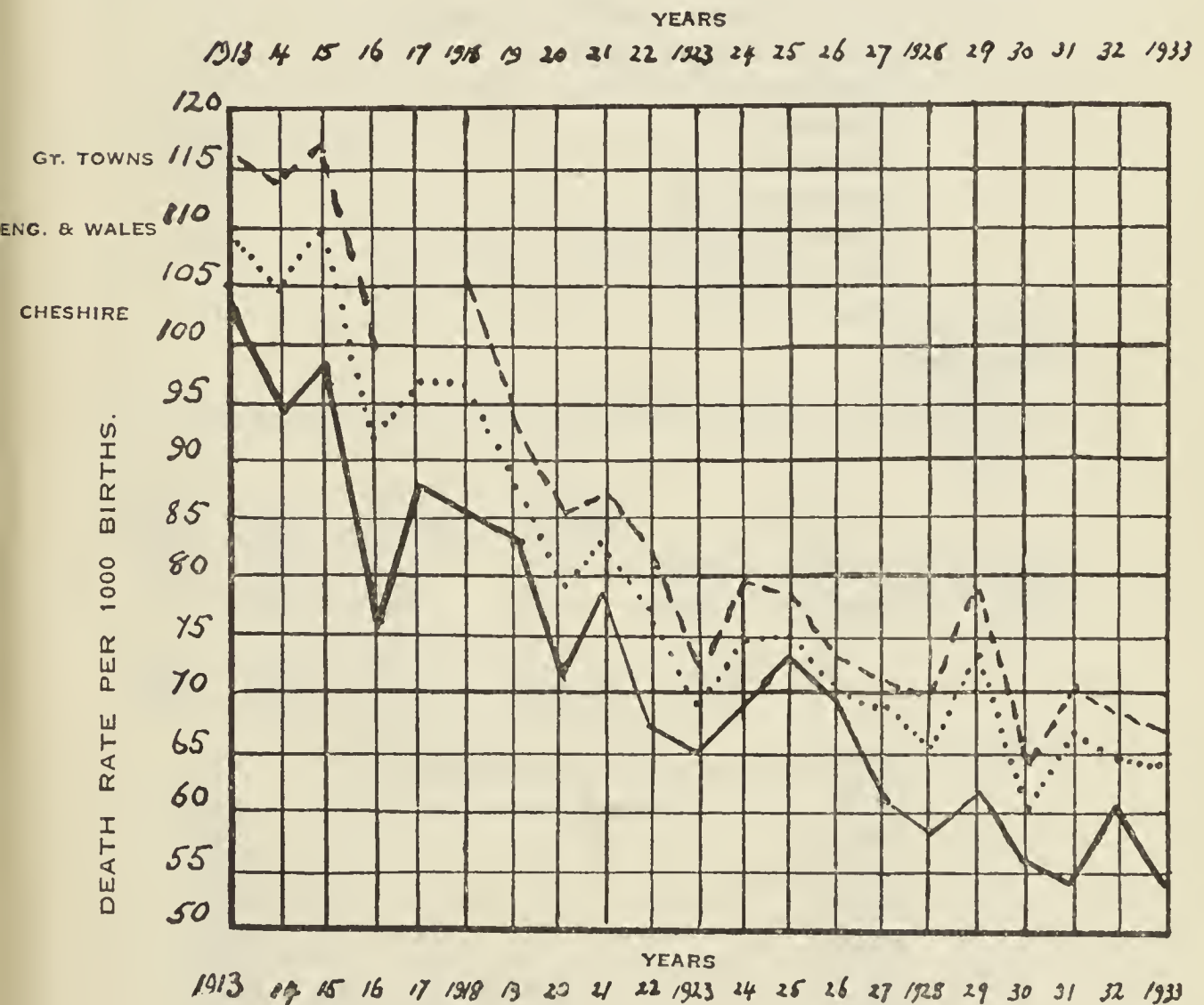
Infantile Mortality.

Your Council commenced their scheme of Maternity and Child Welfare on the 1st April, 1916. The larger portion of the County comes within the scheme, but there are a few districts which are responsible for their own schemes.

There have been 493 deaths of infants under one year in the Administrative County during 1933, a number equivalent to 54 per 1,000 of the recorded births. In 1932 there were 567 deaths, the rate being 61 per 1,000.

Particulars of the Infantile death-rate for the last 20 years are shown on the following graph. This year's death-rate equals the lowest on record, which was in 1931.

INFANTILE MORTALITY.



Comparative statistics are:—

England and Wales	64
118 Great Towns	67
132 Smaller Towns	56
London	59

The highest infantile death-rates were:—

Alsager U.D.	96
Neston U.D.	87
Winsford U.D.	86
Buglawton U.D.	83

It is necessary to point out that in districts with small populations a very slight increase or decrease in infantile (or other) deaths in any one year will shew a marked fluctuation in the rate of mortality.

The lowest infantile death-rates were:—

Alderley Edge U.D.	Nil.
Hollingworth U.D.	Nil.
Mottram U.D.	Nil.
Tarporley U.D.	Nil.
Bucklow R.D.	Nil.
Tintwistle R.D.	Nil.
Hoole U.D.	13
Marple U.D.	13

Tuberculosis.

The deaths recorded during 1933 under this heading are as under:—

	Urban Districts.	Rural Districts.	Total.	Total 1932.
Tuberculosis of the Lungs ...	238	62	300	367
Other Tuberculous Diseases	61	28	89	93
	—	—	—	—
All Forms ...	299	70	389	460
	—	—	—	—

Total Deaths from Tuberculosis Disease:—

1921	527
1922	550
1923	488
1924	512
1925	510
1926	489
1927	488
1928	499
1929	465
1930	438
1931	438
1932	460
1933	389

The principal causes of death are set out in the following table:—

Disease.	No. of Deaths.
Heart Disease	1896
Cancer	1077
Cerebral Hæmorrhage	405
Respiratory Diseases—	
Pneumonia	448
Bronchitis	337
Other Respiratory Diseases	71
Phthisis	300
Nephritis	275

As in previous years the chief cause of death is Heart Disease, a slight increase being noted in the number of deaths this year as compared with 1932.

Cancer which again comes next on the list shows a slight decrease, there being 1,077 deaths this year as compared with 1,102 last year.

VITAL STATISTICS.

10 YEAR AVERAGES, 1923—32.

	Cheshire	Aggregate Administrative Counties England and Wales
Birth Rate	15.30	16.72
Death Rate	11.59	11.63
Maternal Mortality Rate—		
Sepsis	1.503	1.525
Other Causes	2.742	2.531
Total	4.245	4.056
Infant Mortality Rate	63.6	63.4
Deaths from Diarrhoea and Enteritis (under 2 years of age) for 1000 registered births	4.921	6.043
Deaths per million population from—		
Enteric Fever	10.5	10.1
Scarlet Fever	18.6	17.0
Diphtheria	64.9	67.8
Whooping Cough	79.2	87.6
Measles	72.7	85.4
Tuberculosis—(Respiratory)	555.5	701.7
Tuberculosis—Other forms	169.4	168.9
Other Respiratory Diseases*	1494.6	1527.8
Cancer	1401.1	1371.4
Cardiac Disease	2001.4	1950.1

* Excluding Influenza.

COUNTY OF CHESHIRE.

BIRTH AND DEATH RATES, 1923-32.

The Figures for Aggregate Administrative Counties in England and Wales are shewn in brackets.

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Birth Rate per 1,000	..	..	..	..	..	..	..	..	..	..
	17.4 (19.2)	16.6 (18.4)	16.0 (17.9)	15.8 (17.4)	15.2 (16.4)	15.0 (16.4)	14.6 (15.8)	14.7 (16.0)	14.2 (14.8)	13.5 (14.9)
Death Rate per 1,000	..	..	..	..	..	..	..	..	..	..
	11.2 (11.2)	11.8 (11.8)	11.9 (11.8)	11.3 (11.2)	11.5 (12.0)	11.3 (11.3)	12.7 (12.8)	11.1 (11.1)	11.3 (11.3)	11.8 (11.8)
Maternal Death Rate (per 1,000 births)										
(a) from Sepsis	..	..	..	..	..	..	..	..	..	..
	1.36 (1.24)	1.31 (1.31)	2.12 (1.36)	1.65 (1.48)	0.99 (1.49)	1.61 (1.70)	2.14 (1.77)	1.72 (1.79)	0.99 (1.59)	1.14 (1.53)
(b) from other causes	..	..	..	..	..	..	..	..	..	..
	3.16 (2.47)	2.81 (2.51)	2.70 (2.62)	1.94 (2.52)	2.48 (2.47)	3.61 (2.71)	2.65 (2.51)	2.68 (2.44)	2.18 (2.45)	3.21 (2.55)
(c) Total	..	..	..	..	..	..	..	..	..	..
	4.52 (3.71)	4.12 (3.82)	4.82 (3.98)	3.59 (4.00)	3.47 (3.96)	5.22 (4.41)	4.79 (4.28)	4.40 (4.23)	3.17 (4.04)	4.35 (4.08)
Infant Mortality Rate per 1,000 registered live Births	..	..	..	..	..	..	..	..	..	..
	65 (64)	70 (68)	73 (69)	70 (64)	61 (64)	58 (60)	65 (68)	57 (56)	55 (61)	62 (60)
Deaths from Diarrhoea and Enteritis (under 2 years of age) per 1,000 registered Births	..	..	..	..	..	..	..	..	..	..
	5.51 (6.74)	5.52 (6.25)	6.18 (7.10)	6.19 (7.08)	4.86 (5.20)	5.02 (5.68)	4.80 (6.46)	4.21 (5.19)	3.23 (4.87)	3.69 (5.84)

Causes of Death (Rate per Million).

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Enteric Fever (including Paratyphoid)	20 (13)	8 (14)	8 (10)	18 (10)	11 (10)	8 (12)	6 (10)	9 (8)	10 (7)	7 (7)
Scarlet Fever	14 (22)	22 (20)	33 (20)	28 (17)	15 (15)	21 (14)	33 (17)	9 (18)	7 (14)	6 (13)
Diphtheria	38 (69)	44 (63)	53 (66)	76 (69)	48 (61)	50 (76)	96 (81)	96 (83)	72 (58)	76 (49)
Whooping Cough	94 (96)	44 (88)	138 (136)	83 (96)	71 (89)	62 (62)	109 (150)	49 (44)	55 (52)	87 (63)
Measles	57 (116)	187 (109)	51 (101)	89 (84)	59 (57)	74 (110)	30 (49)	108 (95)	12 (55)	60 (78)
Tuberculosis of Respiratory System	541 (764)	563 (771)	638 (750)	561 (691)	547 (715)	572 (680)	535 (710)	513 (661)	546 (663)	539 (612)
Tuberculosis—other forms ..	226 (212)	233 (201)	152 (188)	186 (174)	189 (168)	177 (162)	160 (152)	134 (147)	100 (144)	137 (141)
Other Diseases of the Respiratory System (excluding Influenza)	1873 (1614)	1761 (1845)	1776 (1737)	1511 (1512)	1517 (1729)	1261 (1314)	1786 (1781)	1154 (1154)	1208 (1332)	1099 (1260)
Cancer	1241 (1259)	1369 (1279)	1332 (1320)	1387 (1347)	1321 (1355)	1408 (1405)	1390 (1409)	1510 (1433)	1534 (1401)	1519 (1506)
Heart Disease	1497 (1490)	1651 (1575)	1733 (1645)	1593 (1630)	1789 (1808)	1985 (1909)	2367 (2323)	2290 (2202)	2509 (2348)	2600 (2571)

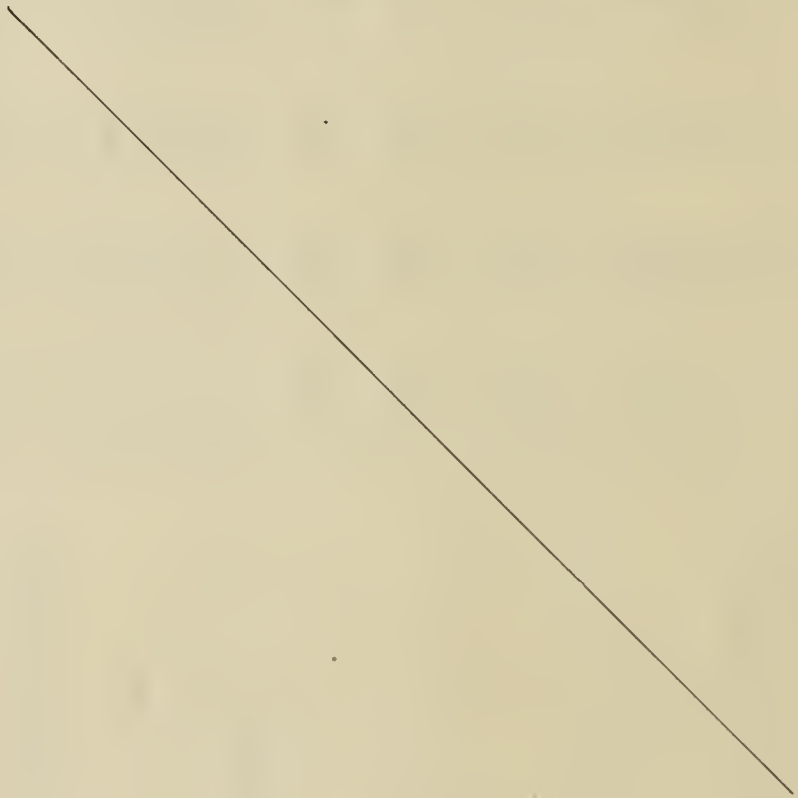
Section III.-Infectious Diseases.

Isolation Hospitals.

Under Section 63 of the Local Government Act, 1929, it became compulsory for every County to make a survey of the Isolation Hospital accommodation for the treatment of infectious disease.

The scheme for the treatment of infectious diseases within the County submitted to and agreed upon by the Committee, the essential points of which were set out on page 26 of the 1931 report is being proceeded with and it is hoped that agreement with the Local Authorities will be reached in the near future.

The various Isolation Hospitals in the County and their accommodation are shown in the following table:—



Authority.	Hospital.	Situation.	Districts Served.	Popula- tion Served.	Accommodation.		
					Blocks.	Wards.	Beds.
Altrincham U.D.C.	Altrincham	Sinderland Road, Altrincham	Altrincham U.D. Bowdon U.D.	23428	4	8	34
Congleton and District J.H.B.	West Heath Sanatorium	West Heath, Congleton	Congleton Borough Congleton R.D. Alsager U.D. Buglawton U.D. Sandbach U.D.	43025	4	11	34
Crewe T.C.	Crewe	North of Crewe	Crewe Borough	47850	4	12	40
Hyde T.C.	Hyde	Black Bowser Lane, Hyde	Hyde Borough Audenshaw U.D. Bredbury and Romiley U.D. Compstall U.D. Denton U.D. Disley R.D. Dukinfield Borough Hazel Grove and Bramhall U.D. U.D. Marple U.D. Stalybridge Borough Yeardsley-cum-Whaley U.D.	139703	6	8 large 18 single	85
Macclesfield T.C.	Macclesfield D.	Moss Lane, Macclesfield	Macclesfield M.B. Macclesfield R.D. Bollington U.D.	55000	2	8	36
Nantwich J.H.B.	Alvaston	Alvaston, near Nantwich	Nantwich U.D. Nantwich R.D.	33200	3	6	20
Northwich R. Northwich U. Middlewich and Winsford	Davenham	Davenham, near Northwich	Northwich R.D. Northwich U.D. Middlewich U.D. Winsford U.D.	58739	4	12	35
Runcorn U.D.C.	Runcorn U.D.C.	Weston Road, Runcorn	Runcorn U.D.	18570	2	4	20
Runcorn R.D.C.	Runcorn R.D.	Parish of Dutton	Runcorn R.D.	30940	3	9	28
Wirral J.H.B.	Clatterbridge J.H.	Clatterbridge	Bebington and Bromborough U.D. Ellesmere Port and Whitby U.D. Hoylake and West Kirby U.D. Neston and Parkgate U.D. Wirral R.D.	93412	6	15	68

Smallpox Hospitals.

There are at the moment 7 smallpox hospitals in the County.

Authority.	Situation.	Districts Served.	Popula- tion Served.	Accommodation.		
				Ward Blocks.	Wards.	Beds.
Congleton and District S.P.H.C.	Arelid, Sand- bach	Alsager U.D. Buglawton U.D. Congleton B. Congleton R.D. Sandbach U.D.	35000	2	2	12
Macclesfield	Moss Lane, Macclesfield	Macclesfield B. Bollington U.D.	37885	1	2	6
Nantwich	Ravensmoor	Nantwich U.D. Nantwich R.D.	33191	1	2	6
Northwich R. & U. Middlewich and Winsford U.H.C.	Marbury	Northwich R.D. Northwich U.D. Middlewich U.D. Winsford U.D.	53739	3	9	15
Tarvin, Malpas and Tarporley	Tiverton	Tarvin R.D. Malpas R.D. Tarporley U.D.	20373	1	1	2
Mottram, Holling- worth and Tint- wistle J.C.	Carrhouse Lane	Mottram U.D. Hollingworth U.D. Tintwistle R.D.	6879	1	2	6
Hyde T.C.	Old Road, Hyde	Hyde Dukinfield Bredbury and Romiley Disley R.D. Hazel Grove Bramhall U.D. Macclesfield R.D. Marple U.D. Yeardsley-cum-Whaley Droylsden U.D. Denton U.D.	226358	2	6	30

Ambulances.

All cases of infectious disease are dealt with by the ambulances attached to the various Isolation Hospitals, and the various Sanatoria.

The ambulance provision for ordinary sickness and accidents has recently been reviewed and appears adequate.

Apart from infectious cases the following are the arrangements in force in the County:—

Congleton Borough	Two motor ambulances.
Crewe Borough	Three motor ambulances.
Dukinfield Borough	Make use of Hyde Police Ambulance.
Hyde Borough	Two motor ambulances.
Macclesfield Borough	Two motor ambulances (one belonging to the Red Cross Society).
Stalybridge Borough	One motor ambulance.
Alderley Edge Urban	One Motor ambulance—Red Cross Society.
Alsager Urban	Have arrangement with Stoke and Newcastle for use of their ambulances.
Altrincham Urban	Two motor ambulances.
Bebington Urban	One motor ambulance attached to Port Sunlight Hospital.
Bollington Urban	Have arrangement with Macclesfield Corporation.
Bowdon Urban	One motor ambulance; jointly with Hale.
Bredbury Urban	Arrangement with Hyde Corporation.
Buglawton Urban	Arrangement for use of Congleton ambulance.
Cheadle Urban	A new motor ambulance has been provided by the District Council.
Compstall Urban	Make use of Hyde and Stockport ambulances.
Ellesmere Port Urban	Two motor ambulances.
Handforth Urban	Arrangement with Wilmslow.
Hazel Grove Urban	Arrangement with Stockport Corporation.
Hollingworth Urban	Arrangement with Glossop and Hyde.
Hoole Urban	Make use of ambulances from Chester Infirmary and the Chester Fire Brigade.
Hoylake Urban	One motor ambulance.
Knutsford Urban	Agreement with Altrincham.
Lymm Urban	Agreement with Altrincham.
Marple Urban	Arrangement with Stockport.
Middlewich Urban	The Winsford St. John's Motor Ambulance.

Mottram Urban	Use Stalybridge and Hyde Police Ambulances.
Nantwich Urban	Maintain a Red Cross Ambulance jointly with Rural area.
Neston Urban	Have no ambulance.
Northwich Urban	Police hand ambulance. Imperial Chemical Co. provide their own. Use is made of a private motor ambulance.
Runcorn Urban	Council subsidise a private firm for the use of a modern motor ambulance.
Sale Urban	Two motor ambulances.
Sandbach Urban	An annual sum is paid for the use of a St. John's Brigade motor Ambulance.
Tarporley Urban	Chester Infirmary Ambulance used when necessary.
Wilmslow Urban	One motor ambulance.
Yeardsley-cum-Whaley Urban	Subscribe annually for use of New Mills Red Cross Ambulance.
Bucklow Rural	Have no ambulance, but consider the area well served.
Chester Rural	Make use of Chester ambulances.
Congleton Rural	Make use of Sandbach ambulances.
Disley Rural	Has services of Stockport ambulance.
Macclesfield Rural	No ambulance, but are negotiating for use of that owned by Macclesfield Borough.
Malpas Rural	No ambulance.
Nantwich Rural	Joint use of an ambulance with Nantwich Urban District.
Northwich Rural	Make use of the ambulances, from Northwich and Winsford.
Runcorn Rural	One motor ambulance.
Tarvin Rural	Make use of Chester City Ambulances.
Tintwistle Rural.	Utilise the Hyde ambulance.
(Wirral Rural	Had agreements with Birkenhead Corporation and Messrs. Lever Bros. for the use of ambulance).

Number of Cases of Infectious Disease notified during the year 1933.

			Small- pox.	Scarlet fever.	Diph- theria.	Enteric fever.	Pneu- monia.	Puerperal fever.	Puerperal pyrexia.	Ery- sipelas.
Alderley Edge U.D...	—	4	2	—	2	—	—	1
Alsager U.D...	—	3	2	—	2	—	—	1
Altrincham U.D.	—	13	14	—	55	—	4	9
Bebington U.D.	—	70	21	1	68	—	3	7
Bollington U.D.	—	8	7	—	6	—	—	1
Bowdon U.D.	—	6	—	—	—	—	—	2
Bredbury and Romiley U.D.	—	11	14	—	32	—	—	11
Buglawton U.D.	—	3	—	—	3	—	—	—
Cheadle and Gatley U.D.	—	79	10	—	27	—	2	5
Compstall U.D.	—	3	—	—	4	1	—	—
Congleton M.B.	—	21	1	—	44	1	3	15
Crewe M.B.	—	164	56	—	23	3	4	17
Dukinfield M.B.	—	35	1	4	43	—	—	9
Ellesmere Port U.D.	—	35	36	—	69	—	3	9
Hale U.D.	—	13	—	—	21	—	—	3
Handforth U.D.	—	1	—	—	1	—	—	—
Hazel Grove and Bramhall U.D.	—	19	5	—	5	1	—	2
Hollingworth U.D.	—	4	—	—	10	—	—	—
Hoole U.D.	—	40	—	—	5	—	3	1
Hoylake U.D.	—	34	16	—	33	—	1	3
Hyde M.B.	—	149	6	—	69	—	—	17
Knutsford U.D.	—	8	2	—	4	—	1	1
Lymm U.D.	—	7	3	—	4	—	1	1
Macclesfield M.B.	—	44	42	1	75	1	—	6
Marple U.D...	—	17	5	—	6	—	—	—
Middlewich U.D.	—	1	5	—	16	2	—	2
Mottam-in-Longendale U.D.	—	1	—	—	3	—	—	2
Nantwich U.D.	—	9	—	—	2	—	2	1
Neston U.D...	—	9	21	—	20	1	1	1
Northwich U.D.	—	20	2	—	22	—	1	7
Runcorn U.D.	—	10	7	—	15	—	1	4
Sale U.D.	—	82	6	—	31	2	—	12
Sandbach U.D.	—	20	2	—	12	—	—	—
Stalybridge M.B.	—	112	5	1	42	—	—	15
Tarporley U.D.	—	2	—	—	1	—	—	—
Wilmslow U.D.	—	12	2	—	10	2	—	1
Winsford U.D.	—	9	3	—	75	—	—	2
Wirral U.D.	—	20	47	—	8	—	1	3
Yeardsley-cum-Whaley U.D.	—	—	4	1	1	—	—	—
Bucklow R.D.	—	22	17	—	46	1	1	8
Chester R.D...	—	37	6	1	8	—	2	1
Congleton R.D.	—	14	15	—	16	—	3	6
Disley R.D.	—	1	2	—	2	—	—	—
Macclesfield R.D.	—	21	13	1	21	—	2	3
Malpas R.D.	—	1	1	—	8	1	—	1
Nantwich R.D.	—	46	12	—	8	2	2	5
Northwich R.D.	—	34	17	—	47	—	3	8
Runcorn R.D.	—	60	3	1	54	3	3	11
Tarvin R.D.	—	5	1	2	19	—	1	2
Tintwistle R.D.	—	—	1	—	5	—	—	1
Wirral R.D.	—	8	38	—	31	—	—	1

Age	Sex	Case	Diagnosis	Result
1	M	1	Scarlet fever (S.F.)	Recovered
1	F	2	Scarlet fever (S.F.)	Recovered
2	M	3	Scarlet fever (S.F.)	Recovered
2	F	4	Scarlet fever (S.F.)	Recovered
3	M	5	Scarlet fever (S.F.)	Recovered
3	F	6	Scarlet fever (S.F.)	Recovered
4	M	7	Scarlet fever (S.F.)	Recovered
4	F	8	Scarlet fever (S.F.)	Recovered
5	M	9	Scarlet fever (S.F.)	Recovered
5	F	10	Scarlet fever (S.F.)	Recovered
6	M	11	Scarlet fever (S.F.)	Recovered
6	F	12	Scarlet fever (S.F.)	Recovered
7	M	13	Scarlet fever (S.F.)	Recovered
7	F	14	Scarlet fever (S.F.)	Recovered
8	M	15	Scarlet fever (S.F.)	Recovered
8	F	16	Scarlet fever (S.F.)	Recovered
9	M	17	Scarlet fever (S.F.)	Recovered
9	F	18	Scarlet fever (S.F.)	Recovered
10	M	19	Scarlet fever (S.F.)	Recovered
10	F	20	Scarlet fever (S.F.)	Recovered
11	M	21	Scarlet fever (S.F.)	Recovered
11	F	22	Scarlet fever (S.F.)	Recovered
12	M	23	Scarlet fever (S.F.)	Recovered
12	F	24	Scarlet fever (S.F.)	Recovered
13	M	25	Scarlet fever (S.F.)	Recovered
13	F	26	Scarlet fever (S.F.)	Recovered
14	M	27	Scarlet fever (S.F.)	Recovered
14	F	28	Scarlet fever (S.F.)	Recovered
15	M	29	Scarlet fever (S.F.)	Recovered
15	F	30	Scarlet fever (S.F.)	Recovered
16	M	31	Scarlet fever (S.F.)	Recovered
16	F	32	Scarlet fever (S.F.)	Recovered
17	M	33	Scarlet fever (S.F.)	Recovered
17	F	34	Scarlet fever (S.F.)	Recovered
18	M	35	Scarlet fever (S.F.)	Recovered
18	F	36	Scarlet fever (S.F.)	Recovered
19	M	37	Scarlet fever (S.F.)	Recovered
19	F	38	Scarlet fever (S.F.)	Recovered
20	M	39	Scarlet fever (S.F.)	Recovered
20	F	40	Scarlet fever (S.F.)	Recovered
21	M	41	Scarlet fever (S.F.)	Recovered
21	F	42	Scarlet fever (S.F.)	Recovered
22	M	43	Scarlet fever (S.F.)	Recovered
22	F	44	Scarlet fever (S.F.)	Recovered
23	M	45	Scarlet fever (S.F.)	Recovered
23	F	46	Scarlet fever (S.F.)	Recovered
24	M	47	Scarlet fever (S.F.)	Recovered
24	F	48	Scarlet fever (S.F.)	Recovered
25	M	49	Scarlet fever (S.F.)	Recovered
25	F	50	Scarlet fever (S.F.)	Recovered
26	M	51	Scarlet fever (S.F.)	Recovered
26	F	52	Scarlet fever (S.F.)	Recovered
27	M	53	Scarlet fever (S.F.)	Recovered
27	F	54	Scarlet fever (S.F.)	Recovered
28	M	55	Scarlet fever (S.F.)	Recovered
28	F	56	Scarlet fever (S.F.)	Recovered
29	M	57	Scarlet fever (S.F.)	Recovered
29	F	58	Scarlet fever (S.F.)	Recovered
30	M	59	Scarlet fever (S.F.)	Recovered
30	F	60	Scarlet fever (S.F.)	Recovered
31	M	61	Scarlet fever (S.F.)	Recovered
31	F	62	Scarlet fever (S.F.)	Recovered
32	M	63	Scarlet fever (S.F.)	Recovered
32	F	64	Scarlet fever (S.F.)	Recovered
33	M	65	Scarlet fever (S.F.)	Recovered
33	F	66	Scarlet fever (S.F.)	Recovered
34	M	67	Scarlet fever (S.F.)	Recovered
34	F	68	Scarlet fever (S.F.)	Recovered
35	M	69	Scarlet fever (S.F.)	Recovered
35	F	70	Scarlet fever (S.F.)	Recovered
36	M	71	Scarlet fever (S.F.)	Recovered
36	F	72	Scarlet fever (S.F.)	Recovered
37	M	73	Scarlet fever (S.F.)	Recovered
37	F	74	Scarlet fever (S.F.)	Recovered
38	M	75	Scarlet fever (S.F.)	Recovered
38	F	76	Scarlet fever (S.F.)	Recovered
39	M	77	Scarlet fever (S.F.)	Recovered
39	F	78	Scarlet fever (S.F.)	Recovered
40	M	79	Scarlet fever (S.F.)	Recovered
40	F	80	Scarlet fever (S.F.)	Recovered
41	M	81	Scarlet fever (S.F.)	Recovered
41	F	82	Scarlet fever (S.F.)	Recovered
42	M	83	Scarlet fever (S.F.)	Recovered
42	F	84	Scarlet fever (S.F.)	Recovered
43	M	85	Scarlet fever (S.F.)	Recovered
43	F	86	Scarlet fever (S.F.)	Recovered
44	M	87	Scarlet fever (S.F.)	Recovered
44	F	88	Scarlet fever (S.F.)	Recovered
45	M	89	Scarlet fever (S.F.)	Recovered
45	F	90	Scarlet fever (S.F.)	Recovered
46	M	91	Scarlet fever (S.F.)	Recovered
46	F	92	Scarlet fever (S.F.)	Recovered
47	M	93	Scarlet fever (S.F.)	Recovered
47	F	94	Scarlet fever (S.F.)	Recovered
48	M	95	Scarlet fever (S.F.)	Recovered
48	F	96	Scarlet fever (S.F.)	Recovered
49	M	97	Scarlet fever (S.F.)	Recovered
49	F	98	Scarlet fever (S.F.)	Recovered
50	M	99	Scarlet fever (S.F.)	Recovered
50	F	100	Scarlet fever (S.F.)	Recovered

NAME OF INSTITUTION.	INSURED.				UNINSURED.				
	Males.	Females.	Total.	Average period in Residence.	Males.	Females.	Children under 16.	Total.	Average period in Residence.
SANATORIA.									
Cheshire Joint Sanatorium, Market Drayton	163	107	275	Wks. 17 Dys. 4	27	52	—	79	Wks. 19 Dys. 5
Wrenbury Hall Colony, nr. Nantwich	55	—	55	29	1	—	—	1	52
Eastby Sanatorium, Skipton, Yorks.	—	—	—	—	—	—	18	18	14
Liverpool Sanatorium, Kingswood, Frodsham	3	7	10	26	5	1	3	33	17
	226	114	340		29	55	47	131	
PULMONARY HOSPITALS.									
Hyde Pavilion, Hyde	80	—	80	18	1	9	—	10	13
Sealand Pavilion, near Chester ...	3	1	4	29	1	1	2	3	33
Baguley Sanatorium, Timperley ...	6	—	6	30	1	—	1	1	10
Crewe Pavilion, Crewe	2	—	2	26	6	2	—	2	1
Mount Pleasant Hospital, Liverpool	14	11	25	19	2	2	25	1	28
Hefferston Grange San., Weaverham	11	23	34	18	1	2	21	—	23
	116	35	151		16	49	2	67	
GENERAL HOSPITALS.									
War Memorial Hospital, Congleton...	2	—	2	4	5	—	—	3	3
Albert Infirmary, Winsford	2	—	2	10	6	—	—	4	4
District Infirmary, Ashton-u-Lyne ...	1	5	6	16	2	—	2	9	11
General Infirmary, Macclesfield ...	4	3	7	8	6	—	—	7	7
Royal Infirmary, Manchester	6	5	11	3	4	3	8	3	14
Royal Infirmary, Chester	1	1	2	1	5	—	1	1	2
Cottage Hospital, Runcorn	—	2	2	9	5	1	—	8	9
Warrington Infirmary, Warrington ..	—	—	—	—	—	—	—	1	1
General Hospital, Altrincham	2	1	3	3	4	—	1	4	5
Royal Southern Hospital, Liverpool	2	—	2	2	—	—	—	4	4
	20	17	37		4	12	44	60	
SPECIAL INSTITUTIONS FOR CHILDREN.									
Royal Liverpool Children's Hospital, Myrtle Street	—	—	—	—	—	—	2	2	5
Leasowe Hospital for Children, Leasowe	—	—	—	—	—	—	58	58	27
Royal Liverpool Children's Hospital, Heswall	—	—	—	—	—	—	61	61	17
	—	—	—	—	—	—	121	121	
ORTHOPAEDIC HOSPITALS.									
Robert Jones and Agnes Hunt Orthopaedic Hospital	15	10	25	17	0	7	9	30	46
North Staffs Cripples Aid Society, Hartshill	—	—	—	—	—	—	1	1	46
	15	10	25		7	9	31	47	
CONVALESCENT HOMES.									
Royal Alexandra Hospital, Rhyl ...	—	9	9	16	5	—	1	4	5
Children's Convalescent Home, West Kirby	—	—	—	—	—	—	11	11	21
	—	9	9			—	1	15	16
SKIN HOSPITALS.									
Manchester and Salford Skin Hospital	3	1	4	15	6	—	8	1	9
	3	1	4			—	8	1	9
TOTAL IN-PATIENTS ...	380	186	566			56	134	261	451
OUT-PATIENT TREATMENT AT VARIOUS CLINICS & HOSPITALS									
TOTAL OUT-PATIENTS ..	17	22	39			7	39	97	143
TOTAL ALL INSTITUTIONS ...	397	208	605			63	173	358	594

STATE OF NEW YORK

IN SENATE

January 1, 1892.
 Albany, N. Y.

REPORT
 OF THE
 COMMISSIONERS OF THE LAND OFFICE
 FOR THE YEAR 1891.

ALBANY: J. B. LIPPINCOTT & CO., PRINTERS.
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Section IV.-Venereal Diseases.

The following statistics are drawn up from the returns supplied by the treatment centres used by County patients:—

Institution.	Persons attending for first time at Out-Patient Clinic suffering from				Total attendances at Out-Patient Clinic.	Number of In-Patient Days.	Doses of Salvarsan substitute given.
	Syphilis.	Soft Chancre	Gonorrhoea.	Non-Veneral conditions.			
Ashton-under-Lyne Infirmary ...	19	1	55	19	3529	42	395
Birkenhead Infirmary ...	5	1	24	11	1386	40	76
Chester Royal Infirmary	14	—	40	5	2581	236	310
Liverpool Seamen's Dispensary ...	1	1	8	7	556	—	12
Liverpool Royal Infirmary ...	4	—	8	2	358	—	87
Liverpool Royal Southern Ancoats Hospital, Manchester ...	1	—	1	—	248	—	—
Manchester Skin Hospital	8	—	5	11	384	—	66
St. Luke's, Manchester	13	—	3	11	620	—	125
Manchester Royal Infirmary ...	10	3	23	6	789	—	81
St. Mary's, Manchester	30	—	39	30	1104	—	283
Salford Boro' Hospital ...	4	—	4	19	349	—	44
Stockport Clinic ...	6	—	19	37	2641	40	328
Shrewsbury Hospital ...	18	—	20	15	1145	—	179
South Shields ...	1	—	—	2	12	—	8
Stoke-on-Trent Clinic ...	1	—	—	—	2	—	2
Warrington Infirmary ...	2	—	7	3	408	—	35
	9	—	15	4	1068	—	143
TOTALS ...	146	6	271	182	17180	486	2174

There is no clinic conducted entirely by the County Council.

Examination of Specimens for Private Practitioners.

The following have been examined at the Manchester Public Health Laboratory.

		SYPHILIS.				GONORRHŒA.			Total Number of Speci- mens.
		Wassermann Reaction.				Gonococcus.			
		Total Exam.	+	Doubt ful.	Not Exam.	Total Exam.	+	Not Exam.	
1st Quarter	...	62	17	i	—	3	1	—	65
2nd	„	65	18	1	—	7	1	—	72
3rd	„	71	8	3	2	12	3	—	83
4th	„	82	12	—	—	3	—	—	85
Total	...	280	55	5	2	25	5	—	305

Section V.-Tuberculosis.

Tuberculosis.

In my report for 1932 I drew special attention to the highly specialised nature of the Tuberculosis Service and set forth the chief points and the lines on which it had been decided to re-organise the service.

During the year the work of re-organisation has been proceeded with, arrangements having been made in two dispensary areas with two Voluntary Hospitals for the Tuberculosis Officers to carry out X-Ray and Artificial Pneumothorax work within the precincts of the Hospital. Co-operation between existing Voluntary Hospitals and the Public Medical services is a most important feature and one which should be developed extensively. In one instance facilities have been given to hold the Dispensary actually on the Hospital premises. Similar negotiations are also in progress with a Voluntary Hospital in another area of the County and it is hoped that agreement will be reached in the very near future. Co-operation of this kind prevents needless reduplication of services and ensures a considerable saving of public money. It has not yet been found possible to close down any of the subsidiary Dispensaries as set out in the scheme of re-organisation, but this will be done as soon as it becomes practicable.

The areas in which Dispensaries have been opened by the Council and the days and times upon which the District Tuberculosis Officers attend are detailed in the following table:—

1. CHESTER AND CREWE DISTRICT.

DR. D. W. TOUGH.

Address of Dispensary.	Days.	Sessions held on	
		Hours.	
Memorial Hospital, Crewe	...Monday	10	0 a.m. to 4 30 p.m.
	...Wednesday	1	0 p.m. to 4 30 p.m.
15, St John Street, Chester	...Wednesday	10	0 a.m. to 12 noon.
52, Victoria Road, Ellesmere	...Thursday	2	30 p.m. to 5 0 p.m.
Port			
Duncan Street, Birkenhead	...Friday	2	0 p.m. to 4 0 p.m.
The Lodge, Darmond's Green, West Kirby	...Tuesday	2	0 p.m. to 4 0 p.m.

2. HYDE DISTRICT.

DR. L. I. HENZELL.

Beeley Street, Hyde	...Monday	10	0 a.m. to 12 noon.
	Wednesday	2	0 p.m. to 4 30 p.m.
		6	0 p.m. to 7 30 p.m.
Throstle Grove House, Great Egerton Street, Stockport	...Monday	3	0 p.m. to 5 0 p.m.
Chapel Street, Congleton	...Friday	2	30 p.m. to 5 0 p.m.
Pear Tree House, Jordangate, Macclesfield	...Friday	10	0 a.m. to 12 noon.

3. NORTHWICH AND ALTRINCHAM DISTRICT.

DR. J. HAGUE.

Address of Dispensary.	Days.	Sessions held on	
		Hours.	
12, Dunham Road, Altrincham...	Tuesday	10	0 a.m. to 12 noon.
	Wednesday	10	0 a.m. to 12 noon.
	Friday	6	0 p.m. to 7 45 p.m.
London Road, Northwich	...Friday	10	0 a.m. to 12 noon.
28, High Street, Runcorn	...Thursday	11	0 a.m. to 12 30 p.m.
Albert Infirmary, Winsford	...Monday	5	30 p.m. to 7 0 p.m.

The tables included in this Report give in considerable detail an account of the work accomplished during the year 1933, and for the purposes of comparison I have separated the outstanding figures for the year under review and the two previous years.

		New Cases (primary) notified during 1933	Corresponding figures for	
			1932	1931
Pulmonary	...	482	481	524
Non-pulmonary	...	272	270	278
Total	...	<hr/> 754 <hr/>	<hr/> 751 <hr/>	<hr/> 802 <hr/>
No of cases remaining on Registers of Notifications kept by District M.O's.H., December 31st, 1933 ...				
		5666	5605	6097
			Corresponding figures for	
			1932	1931
No. of Deaths from all forms of Tuberculosis during 1933		389	460	438
Death-rate from all forms of Tuberculosis per 1,000 of the population, 1933		0.57	0.67	0.64
New Applicants for Treatment during 1933	...	528	423	416
No. of Attendances at Dispen- saries, 1933	...	6098	5306	5645
Specimens examined at County Laboratory, 1933	...	3644	3074	2718
No. of Consultations with Medical Practitioners, 1933		1575	2532	1460
Visits of T.O's. to Homes	...	1166	998	907
Visits of Health Visitors to Homes for Dispensary purposes	...	6586	5762	4881
X-Ray Examinations, 1933	...	217	131	93

In my Report of last year I drew particular attention to the necessity for domiciliary visiting and am pleased to report a further increase during 1933, in the number of such visits paid.

1929	...	...	...	511.
1930	...	...	...	535
1931	...	...	...	907
1932	...	...	...	998
1933	...	...	...	1166

Return showing the work of the Dispensaries during the year 1933.

Diagnosis.	Pulmonary.				Non-pulmonary.				Total.				Grand Total	
	Adults.		Children		Adults.		Children		Adults.		Children			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A—New Cases examined during the year (excluding contacts):														
(a) Definitely tuberculous ...	191	185	11	10	23	44	76	65	214	229	87	75	60	
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	6	5	3	3	1	
(c) Non tuberculous ...	—	—	—	—	—	—	—	—	187	184	82	93	54	
B—Contacts examined during the year:														
(a) Definitely tuberculous ...	8	5	6	1	—	1	11	7	8	6	17	8	3	
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	—	1	—	1	—	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	42	129	151	161	48	
C—Cases written off the Dispensary Register as:														
(a) Recovered ..	15	21	8	10	17	20	41	28	32	41	49	38	16	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous)	—	—	—	—	—	—	—	—	234	318	236	256	104	
D—Number of Cases on Dispensary Register on December 31st, 1933:														
(a) Definitely tuberculous ...	863	710	121	113	225	293	467	348	1088	1003	588	461	3144	
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	6	8	4	7	23	

1. Number of cases on Dispensary Register on January 1st, 1933 2,932
2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years 78
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" 121
4. Cases written off during the year as Dead (all causes) 212
5. Number of attendances at the Dispensary (including Contacts) 6,098
6. Number of Insured Persons under Domiciliary Treatment on the 31st December 1,313
7. Number of consultations with medical practitioners
 - (a) Personal 487
 - (b) Other 1,088
8. Number of visits by Tuberculosis Officers to homes (including personal consultations) 1,166
9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes 6,586

10. Number of:—

(a) Specimens of sputum, etc., examined ... *1,655

(b) X-ray examinations made ... 217

in connexion with Dispensary work.

11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above ... Nil.

21. Number of "T.B. plus" cases on Dispensary Register on December 31st ... 1,095

Number of Dispensaries for the treatment of Tuberculosis (excluding centres used only for special forms of treatment).—

Provided by the Council—13.

Provided by Voluntary Bodies—Nil.

*In addition 1,108 specimens were received from private practitioners for examination for Tubercle Bacilli.

Number of beds available for the treatment of Tuberculosis on the 31st December, 1933, in Institutions belonging to the Council.

Name of Institution.	For Pulmonary Cases.		For Non-pulmonary Cases.		Total.
	Adults.	Children under 15.	Adults.	Children under 15.	
<i>Sanatoria.</i>					
Cheshire Joint Sanatorium, Market Drayton ..	120	—	—	—	120
Wrenbury Hall Colony, nr. Nantwich, Cheshire	50	—	—	—	50
<i>Poor Law Institutions.</i>					
Bucklow Poor Law Institution ..	4	—	4	—	8
Congleton Institution, nr. Sandbach	2	—	2	—	4
*Clatterbridge Institution, Wirral ..	—	—	—	—	12
†Maeclesfield Institution ...	—	—	—	—	11
§Nantwich Institution ...	—	—	—	—	8
arvin Institution, nr. Chester ..	—	—	1	—	1

* No beds are set apart for the treatment of Tuberculosis, but in the Annexe, isolation space is provided in which Tuberculosis male patients, four in number, can be treated. On the verandah of the Annexe beds can be placed for four patients who are undergoing complete open air treatment. In the female infirmary there is space on the balcony for four patients.

† { One pavilion of five beds for adult males.

{ Six separate shelters with one bed each for either adults or children.

§ Eight beds for adult males. No beds reserved for adult females, or children of either sex, for the treatment of Tuberculosis, Pulmonary or Non-pulmonary.

Return showing the extent of Residential Treatment and Observation during the year in Institutions (other than Poor Law Institutions) approved for treatment of Tuberculosis.

	In Institu- tions on Jan. 1st, 1933.	Admitted during the year	Discharged during the year	Died in the Institu- tions	In Institu- tions on Dec. 31st, 1933.
Number of doubt- fully tuberculous cases admitted for observation—					
Adult males ...	3	14	14	*1	2
Adult females	1	7	6	†1	1
Children ...	1	11	10	—	2
Total ...	5	32	30	2	5
Number of definite- ly tuberculous patients admitted for treatment—					
Adult males ...	148	273	247	36	138
Adult females	93	218	180	32	99
Children ...	87	161	153	5	90
Total ...	328	652	580	73	327
Grand Total ...	333	684	610	75	332

* Primary Bronchial Carcinoma with secondary Lung Abscess.

† Pulmonary Tuberculosis.

Return showing the extent of Residential Treatment provided during the year in Poor Law Institutions for persons chargeable to the Council.

	In Institu- tions on Jan. 1st 1933.	Admitted during the year	Discharged during the year	Died in the Institu- tions	In Institu- tions on Dec. 31st 1933.
Number of patients suffering from pulmonary tuber- culosis admitted for treatment—					
Adult males ...	11	33	24	14	6
Adult females	4	22	14	10	2
Children ...	4	4	8	—	—
Total ...	19	59	46	24	8
Number of patients suffering from non- pulmonary tuber- culosis admitted for treatment—					
Adult males ...	4	5	2	2	5
Adult females	1	6	5	1	1
Children ...	1	12	10	—	3
Total ...	6	23	17	3	9
Grand Total ...	25	82	63	27	17

Return showing the results of observation of doubtfully tuberculous cases discharged during the year from Institutions approved for the treatment of Tuberculosis.

Diagnosis on discharge from observation.	For Pulmonary Tuberculosis.			For Non-pulmonary Tuberculosis.			Totals.
	Stay under 4 weeks.	Stay over 4 weeks.	Stay under 4 weeks.	Stay over 4 weeks.			
	M. F. Ch.	M. F. Ch.	M. F. Ch.	M. F. Ch.	M. F. Ch.		
Tuberculous ..	— — —	6 2 —	— — 1	— — 4	6 2 5		
Non-tuberculous	— 1 —	4 2 —	1 — —	— — 1	5 3 1		
Doubtful ...	2 — —	2 1 —	— 1 2	— — 2	4 2 4		
Totals ...	2 1 —	12 5 —	1 1 3	— — 7	15 7 10		

Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year from Institutions approved for the treatment of Tuberculosis.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution											
			Under 3 months.			3—6 months.			6—12 months.			More than 12 months.		
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent	3	1	7	2	3	8	2	2	4	—	—	—
		Not Quiescent	12	3	1	15	6	1	6	6	4	4	1	5
		Died in Institution	2	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. plus. Group 1.	Quiescent	—	—	—	1	—	—	—	1	—	1	—	—
		Not Quiescent	4	2	—	4	—	—	4	5	—	1	2	—
		Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. plus. Group 2.	Quiescent	1	—	—	—	1	—	—	—	—	3	1	—
		Not Quiescent	20	9	—	14	4	—	27	25	—	13	6	1
		Died in Institution	4	5	—	—	—	—	—	1	—	1	—	—
	Class T.B. plus. Group 3.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—
		Not Quiescent	24	12	—	14	10	—	20	12	—	14	10	—
		Died in Institution	16	11	—	4	7	—	2	6	—	4	1	—
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent	6	1	3	—	—	—	—	1	1	1	1	10
		Not Quiescent	11	15	14	1	—	1	2	2	6	1	2	8
		Died in Institution	1	—	—	—	—	1	1	1	—	—	—	2
	Abdominal.	Quiescent	—	—	—	—	—	3	—	—	1	—	—	2
		Not Quiescent	3	5	6	1	2	6	—	1	5	—	—	2
		Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—
	Other Organs.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—
		Not Quiescent	9	14	2	1	2	—	—	—	—	—	—	—
		Died in Institution	1	—	1	—	—	—	—	—	—	—	—	—
	Peripheral Glands.	Quiescent	—	—	—	—	—	4	—	—	1	—	—	4
		Not Quiescent	2	11	29	—	—	9	—	1	2	—	—	3
		Died in Institution	—	—	—	—	—	1	—	—	—	—	—	—

The following table shows the number of Insured (including Discharged Soldiers and Sailors) and Uninsured persons who have received treatment during the years 1920-1933.

YEAR.	INSURED.		UNINSURED.		TOTAL.
	Males.	Females.	Males.	Females.	
1920	371	82	90	104	647
1921	299	73	96	125	593
1922	292	96	105	102	594
1923	300	118	112	136	666
1924	321	136	154	163	774
1925	325	123	147	129	724
1926	336	156	158	217	867
1927	412	134	169	188	903
1928	416	158	194	203	971
1929	444	175	242	303	1164
1930	438	184	241	318	1181
1931	401	202	258	316	1177
1932	376	216	250	297	1139
1933	397	208	257	337	1199

Number of new applications for treatment under the County Tuberculosis Scheme during the years 1927-1933.

YEAR.	DIS- CHARGED SOLDIERS.	INSURED.	UNINSURED.	TOTAL.
1927	—	234	216	450
1928	1	228	233	462
1929	1	241	205	447
1930	2	238	213	453
1931	—	224	192	416
1932	1	242	180	423
1933	—	273	255	528
Totals.	5	1680	1494	3179

Table relating to Tuberculosis in children:—

Year.	Number of Children notified as suffering from Pulmonary Tuberculosis.	Number of Children notified as suffering from Non-Pulmonary Tuberculosis.	Per % of Total Notifications.	
			Pulmonary.	Non-Pulmonary.
1927	46	224	8.303	62.57
1928	44	222	7.483	63.61
1929	47	207	7.556	63.303
1930	36	201	6.59	65.47
1931	33	185	6.3	66.55
1932	40	170	8.32	62.96
1933	31	187	6.4	65.07

Number of beds occupied by Children in Institutions.
 1933—Pulmonary, 48; Non-Pulmonary, 213. Total,
 261.

Statement showing number of Patient Days and average number of beds occupied during the period 1/1/33 to 31/12/33.

INSTITUTION.	Number of Patient Days.	Average number of Beds occupied.
SANATORIA.		
Cheshire Joint Sanatorium	43,971	
Wrenbury Hall Colony	11,756	
Eastby Sanatorium	1,888	
Liverpool Sanatorium	5,858	
	63,423	174
PULMONARY HOSPITALS.		
Hyde Pavilion	11,122	
Sealand Pavilion	1,521	
Baguley Sanatorium	1,340	
Crewe Pavilion	401	
Mount Pleasant Hospital	5,837	
Hefferston Grange Sanatorium	7,117	
	27,338	75
GENERAL HOSPITALS.		
Stockport Infirmary	56	
Congleton War Memorial Hospital	133	
Albert Infirmary, Winsford	406	
Ashton-under-Lyne Infirmary	1,865	
Macclesfield General Infirmary	1,083	
Manchester Royal Infirmary	563	
Chester Royal Infirmary	60	
Runcorn Cottage Hospital	547	
Altrincham General Hospital... ..	182	
Royal Southern Hospital, Liverpool	72	
Royal Liverpool Children's Hospital, Myrtle Street	75	
Warrington Infirmary	55	
	5,097	14
ORTHOPÆDIC INSTITUTIONS.		
Leasowe Hospital for Children	11,160	
Royal Liverpool Children's Hospital, Heswall	7,396	
Shropshire Orthopædic Hospital	8,203	
North Staffs Cripples Aid Society	328	
	27,087	74
CONVALESCENT HOMES.		
Royal Alexandra Hospital, Rhyl	1,658	
West Kirby Convalescent Home	1,643	
	3,301	9
SKIN HOSPITALS.		
Manchester & Salford Skin Hospital	711	
	711	2
TOTAL ALL INSTITUTIONS	126,957	348

The following Statement indicates the Institutions to which patients have been admitted from the administrative County of Chester, during the year ending 31st December, 1933, and also numbers of Insured and Uninsured persons respectively treated in each Institution, together with a Statement of the average duration of periods of residence.

Table showing the actual number of Deaths from Tuberculosis during the past twenty years.

Year.	Pulmonary.		Non-Pulmonary.		Total. All forms.
1914	...	445	...	210	655
1915	...	469	...	208	677
1916	...	510	...	167	677
1917	...	494	...	177	671
1918	...	548	...	196	744
1919	...	452	...	140	592
1920	...	454	...	124	578
1921	...	388	...	139	527
1922	...	418	...	132	550
1923	...	344	...	144	488
1924	...	362	...	150	512
1925	...	412	...	98	510
1926	...	367	...	122	489
1927	...	363	...	125	488
1928	...	381	...	118	499
1929	...	358	...	107	465
1930	...	347	...	91	438
1931	...	370	...	68	438
1932	...	367	...	93	460
1933	..	300	..	89	389

The 1933 figures are made up as follows:—

		Male.		Female.		Total.
Pulmonary	..	176	..	124	..	300
Non-Pulmonary	..	39	..	50	..	89
		<hr/>		<hr/>		<hr/>
		215	..	174	..	389
		<hr/>		<hr/>		<hr/>

Death Rates, 1933.

All forms of Tuberculosis, .57 per 1,000 of population.

Pulmonary Tuberculosis, .44 per 1,000 of population.

Non-Pulmonary Tuberculosis, .13 per 1,000 of population.

The figures for the five preceding years are as under:—

Year.	Pulmonary.		Non-Pulmonary.		All Forms.
1928	...	0.57	...	0.17	0.74
1929	...	0.53	...	0.16	0.69
1930	...	0.51	...	0.13	0.64
1931	...	0.54	...	0.10	0.64
1932	..	0.53	..	0.13	0.67

TABLE SHOWING DEATHS FROM TUBERCULOSIS AT DIFFERENT PERIODS OF LIFE
IN THE ADMINISTRATIVE COUNTY OF CHESTER, DURING THE YEAR 1933.

		Aggregate of Urban Districts.													Aggregate of Rural Districts.												
Sex.	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—			
Pulmonary Tuberculosis.	M	144	—	—	1	15	21	37	34	24	11	1	32	—	—	—	1	—	3	12	5	9	2	—	—		
	F	94	—	1	4	22	24	20	10	6	5	2	30	—	1	—	—	—	9	8	5	3	1	3	—		
Non-pulmonary Tuberculosis.	M	23	2	1	4	6	2	6	—	1	—	1	16	1	2	4	2	2	2	2	—	1	—	—	—		
	F	38	3	2	5	8	6	3	5	1	2	1	12	1	1	3	—	3	1	1	—	2	—	—	—		

Table shewing number of deaths from Tuberculosis in the various districts of the County during the year 1933 :—

District.	Population.	PULMONARY.			NON-PULMONARY			GRAND TOTAL.	Death Rate per 1000 of population.
		M.	F.	Total.	M.	F.	Total.		
MUNICIPAL BOROUGHES.									
Congleton	12,960	4	3	7	—	—	—	7	
Crewe	45,340	12	6	18	3	4	7	25	
Dukinfield	19,250	8	5	13	1	1	2	15	
Hyde	31,710	12	7	19	3	2	5	24	
Macclesfield	34,780	16	7	23	2	3	5	28	
Stalybridge	24,530	8	7	15	—	2	2	17	
	168,570	60	35	95	9	12	21	116	.68
URBAN DISTRICTS.									
Alderley Edge	3,002	—	—	—	—	—	—	—	
Alsager	2,913	1	—	1	—	—	—	—	
Altrincham	21,300	5	3	8	—	—	—	8	
Bebington	32,410	11	9	20	3	3	6	26	
Bollington	4,986	2	1	3	—	1	1	4	
Bowdon	3,262	—	—	—	—	1	1	1	
Bredbury and Romiley ..	11,400	2	2	4	1	—	1	5	
Buglawton	1,635	—	—	—	—	—	—	—	
Cheadle and Gatley	20,110	3	3	6	—	3	3	9	
Compstall	842	—	—	—	—	—	—	—	
Ellesmere Port	23,190	7	2	9	1	2	3	12	
Hale	10,950	2	1	3	1	—	1	4	
Handforth	1,253	1	1	2	—	—	—	2	
Hazel Grove and Bramhall ..	14,180	3	1	4	1	2	3	7	
Hollingworth	2,228	—	—	—	—	—	—	—	
Hoole	6,015	1	3	4	—	—	—	4	
Hoylake and West Kirby ..	19,110	6	4	10	3	2	5	15	
Knutsford	5,721	3	—	3	—	1	1	4	
Lymm	5,724	1	1	2	—	—	—	2	
Marple	7,405	4	2	6	—	—	—	6	
Middlewich	5,481	—	2	2	2	—	2	4	
Mottram	2,569	—	—	—	—	—	—	—	
Nantwich	7,152	5	2	7	—	1	1	8	
Neston and Parkgate	7,650	2	—	2	—	1	1	3	
Northwich	18,200	5	8	13	—	1	1	14	
Runcorn	18,050	8	4	12	—	3	3	15	
Sale	29,880	5	4	9	1	2	3	12	
Sandbach	6,416	—	2	2	—	—	—	2	
Tarporley	2,469	—	1	1	1	1	2	3	
Wilmslow	10,220	3	2	5	—	—	—	5	
Winsford	10,810	2	—	2	—	1	1	3	
Yeardsley-cum-Whaley	1,767	—	—	—	—	—	—	—	
Wirral U.D.	7,450	2	1	3	—	1	1	4	
	325,750	84	59	143	14	26	40	183	.56
RURAL DISTRICTS.									
Bucklow	22,310	1	3	4	—	2	2	6	
Chester	16,940	7	4	11	3	1	4	15	
Congleton	13,530	2	1	3	—	—	—	3	
Disley	3,295	2	—	2	—	—	—	2	
Macclesfield	19,510	2	5	7	2	1	3	10	
Malpas	4,333	—	—	—	—	—	—	—	
Nantwich	26,400	4	5	9	2	2	4	13	
Northwich	27,370	7	5	12	3	2	5	17	
Runcorn	32,460	4	3	7	4	4	8	15	
Tarvin	13,050	1	3	4	2	—	2	6	
Tintwistle	2,002	1	—	1	—	—	—	1	
Wirral	7,770	1	1	2	—	—	—	2	
	188,970	32	30	62	16	12	28	90	47

Total Population 683,290.

All Forms of Tuberculosis .57 per 1000 of population.

Pulmonary Tuberculosis .44 per 1000 of population.

Non-Pulmonary Tuberculosis .13 per 1000 of population.

County Public Health Laboratory.

It will be seen from the following details that the work of this Department is increasing steadily every year: there is no doubt that extension will have to be considered in the near future.

Table showing number of specimens examined in the County Public Health Laboratory during the year 1933 in respect of patients resident in Institutions.

Sanatoria.

	Neg.	Pos.
Wrenbury Hall, Wrenbury	282	209
Borough Hospital, Hyde. T.B. Pavilion	41	99
Other Institutions.		
Altrincham General Hospital	8	—
Arclid Institution	1	—
Bucklow Institution	11	2
Clatterbridge Hospital	81	14
Cottage Hospital, Alderley	1	—
Cottage Hospital, Ellesmere Port	7	1
Cottage Hospital, Neston	1	—
Cottage Hospital, Sale	1	—
Cottage Hospital, Tarporley	1	—
Dutton Institution	4	1
Hospital, Port Sunlight	10	2
Lake Hospital, Ashton-under-Lyne ...	37	1
Macclesfield General Infirmary	2	—
National Childrens' Home, Congleton	1	—
National Childrens' Home, Frodsham	2	—

Other Districts.

	Neg.	Pos.
Stretford, Manchester	1	—
Total Number of Specimens Examined during 1933.		
Sputa from patients for T.B. Examinations (23.52% pos.)	2097	645
Urines	5	—
Pleuritic Fluid	3	—
Pus	4	—
Faeces	8	—
Effusion from Knee Joint	1	—
Hair for Ringworm	19	13
Milks (26.79% pos.)	358	131
Sputa from Cows	3	6
	<hr/> 2498	<hr/> 795

2498 Negatives; 795 Positives; Total number examined 3293.

Of the above specimens received from patients it was also necessary to examine by concentration method 351, of which 336 were negative and 15 positive.

Total number of examinations made 3644.

Statement giving Particulars of Specimens Examined in County Public Health Laboratory during the Years 1920 to 1933 inclusive.

YEAR.	Sputa.		Urines.		Glands.		Pleural Effusions.		Blood.		Pus.		Urethral Discharge		Effusion from Knee Joint.		Hair for Ringworm		Skin.		Fæces for Worms.		Ulcer of Lip.		Fallopian Tubes.		Swab from Mouth.		Cerebro Spinal Fluid.		Tonsils for T.B.		Fæces for T.B.		Total Number of Specimens from patients examined.	Milk.		Sputa from Cows.		Total Number of Specimens examined.	Concentration Method Patients' Sputa.		Total Number of Examinations made.
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.		Pos.	Neg.	Pos.	Neg.				
1920	292	1054	..	2	2	1	1	1352	..	1	1353	1353
1921	459	1264	2	5	1	3	*1	1735	1735	1735	
1922	511	1379	..	5	2	1	1	†1	3	4	..	1	1908	..	2	1910	1910	
1923	604	1359	3	9	2	1	1	2	1981	..	3	1984	1984	
1924	528	1548	1	2	1	3	..	2	1	2	12	1	2101	..	1	2102	2102	
1925	516	1566	..	6	2	9	21	1	2122	..	1	2123	2123	
1926	505	1451	..	4	1	2	8	8	1979	1979	1979		
1927	415	1790	..	1	1	6	5	1	2219	2219	2219		
1928	463	1790	..	6	2	1	4	7	6	2	..	1	1	2	2285	2285	2285		
1929	484	1717	..	4	1	1	1	7	5	1	2221	2221	2221		
1930	560	1763	1	6	1	3	3	6	1	2	2346	2346	2346		
1931	664	1926	..	4	1	1	1	48	69	4	2718	2718	2718		
1932	647	1945	..	9	5	1	12	18	1	1	2639	132	276	25	2	3074	26	359	3459		
1933	645	2097	..	5	3	4	1	13	19	8	2795	131	358	6	3	3293	15	336	3644		

* Film appeared to be one of secondary Anæmia.

† Gonococci present.

Statement giving Particulars of the

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Public Health Act, 1925.

No action was taken by the County Council under Section 62 of this Act, which permits the Council to apply for an Order to compulsorily remove a person suffering from Tuberculosis to Hospital.

Non-Pulmonary Tuberculosis.

The scheme for Orthopædic work in relation to Non-Pulmonary Tuberculosis was fully set out in my report of last year, page 47. The scheme has become a fully comprehensive one since the opening of a new clinic at Congleton.

The Institutions which are available for the treatment of these Orthopædic Cases and the clinics connected with them are as follows :—

<i>Hospital.</i>	<i>Clinic.</i>
The Robert Jones and Agnes Hunt Orthopædic Hospital, Oswestry.	} Chester. Crewe.
The Leasowe Hospital for Children and Royal Liverpool Hospital for Chil- dren, Heswall	} Ellesmere Port. Hoylake. New Ferry. Runcorn. Stockton Heath
Royal Infirmary, Manchester	} Alderley Edge. Altrincham. Hyde.
Orthopædic Hospital, Hartshill	Congleton.

During the year the number of attendances at the clinics was 2,734, and 153 patients received Institutional treatment.

The days and times at which the Orthopædic Clinics are held are set out in the following table :—

CHESHIRE COUNTY COUNCIL.

PLACES, DAYS, AND TIMES OF ORTHOPÆDIC AFTER-CARE CLINICS.

<i>Address.</i>	<i>Days</i>	<i>Sessions held on</i>		<i>Hours.</i>	<i>Surgeon attends.</i>
Cottage Hospital, Alderley Edge	... Alternate Thursdays	...	2 0 p.m. to 4 0 p.m.	...	Once every two or three months.
General Hospital, Altrincham	... Fridays	...	2 0 p.m. to 4 0 p.m.	...	Once monthly.
15, St. John Street, Chester	... Fridays	...	10 0 a.m. to 12 30 p.m.	...	As arranged by Shropshire Orthopædic Hospital.
12, West Street, Congleton	... Tuesdays	...	10 0 a.m. to 1 0 p.m.	...	Third Tuesday each month.
Old Railway Hotel, Crewe	... Tuesdays	...	10 0 a.m. to 12 30 p.m.	...	As arranged by Shropshire Orthopædic Hospital.
Welfare Centre, Ellesmere Port	... Mondays	...	2 30 p.m.	...	Fourth Monday each month.
Hoylake Welfare Centre, 8, Market Street	... Fridays	...	2 30 p.m.	...	Third Friday each month.
Orthopædic After-Care Clinic, Hyde	... Mondays ... Wednesdays ... Fridays	...	10 0 a.m. to 5 30 p.m. 10 0 a.m. to 12 30 p.m. 10 0 a.m. to 5 30 p.m.	...	Third Monday each month.
Welfare Centre, Recreation Ground, New Ferry	... Mondays	...	2 30 p.m.	...	Second Monday each month.
Welfare Centre, 29, High Street, Runcorn	... Fridays	...	11 0 a.m.	...	First Friday each month.
Welfare Centre, Methodist Sunday School, Stockton Heath	... Fridays	...	2 30 p.m.	...	First Friday each month.

Summary of Notifications during the period from the 1st Jan., 1933, to the 31st December, 1933.

Age-Periods ...	Formal Notifications.												Total Notifications.
	Number of Primary Notifications of new cases of tuberculosis.												
	0—	1—	5—	10—	5—	20—	25—	35—	45—	55—	65—	Total (all ages)	
Pulmonary Males ...	1	2	4	5	16	26	57	49	55	22	9	246	264
„ Females...	1	3	7	8	31	39	68	44	20	10	5	236	252
Non-Pulmonary Males ...	1	39	44	21	12	3	9	5	5	5	1	145	150
„ „ Females ...	3	24	34	21	13	9	11	5	1	3	3	127	134

SUPPLEMENTAL RETURN.

New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health or Chief (Administrative) Tuberculosis Officer during the period from the 1st January, 1933, to the 31st December, 1933, **otherwise** than by formal notification.

Age-periods ...	0—	1—	5—	10—	15—	20—	25—	35—	45—	55—	65—	Total.
Pulmonary Males ...	—	—	—	—	2	3	12	12	12	8	3	52
„ Females ...	—	—	—	2	5	3	11	6	6	2	2	37
Non-pulmonary Males ...	4	1	4	2	3	2	4	—	1	1	—	22
„ Females ...	3	4	3	—	2	—	2	3	1	2	—	20

The source or sources from which information as to the above-mentioned cases was obtained are stated below :—

Source of Information.

Death Returns (*i.e.*, from local Registrars, or transferable deaths from Registrar General)

Posthumous Notifications

“Transfers” from other areas (other than transferable deaths)

No. of Cases.

Pulmonary.

Non-pulmonary.

...	29	...	21
...	4	...	6
...	56	...	15

NOTIFICATION REGISTER.

	Pulmonary.			Non-pulmonary.			Total Cases.
	Males.	Females.	Total.	Males.	Females.	Total.	
Number of Cases of Tuberculosis remaining at the 31st December, 1933.	1688	1588	3276	1208	1182	2390	5666
Number of Cases removed from the Register during the year.							
Withdrawal of Notification ...	67	53	120	41	30	71	191
Recovery from the Disease ...	65	37	102	96	87	183	285
Death ...	175	122	297	23	28	51	348

Summary of Populations during the year

Year	Age Groups				Total
	0-14	15-64	65-74	75+	
1950	1,200	2,500	1,000	500	5,200
1955	1,300	2,600	1,100	600	5,600
1960	1,400	2,700	1,200	700	6,000
1965	1,500	2,800	1,300	800	6,400

Population by Sex and Age Group

The following table shows the population by sex and age group for the years 1950, 1955, 1960, and 1965. The population is shown in thousands.

Year	Male		Female		Total
	0-14	15-64	0-14	15-64	
1950	1,100	2,400	1,100	2,600	5,200
1955	1,200	2,500	1,200	2,700	5,600
1960	1,300	2,600	1,300	2,800	6,000
1965	1,400	2,700	1,400	2,900	6,400

Contacts.

The importance of the examination and supervision of contacts cannot be too forcibly stressed and the following contribution to the report by Dr. Henzell, District Tuberculosis Officer for the Macclesfield and Hyde Areas, points out the necessity for intensive work in this direction:—

Recent improvements in dispensary organisation in the supplying of more adequate X-Ray facilities lead to greater possibilities in detecting Tuberculous disease in contacts, and especially in child contacts, living in association with known cases of Pulmonary Tuberculosis; for it must not be forgotten that Tuberculosis is an infectious disease and that, broadly speaking, the measures adopted for its control should be similar to those adopted for other infectious diseases, where the results of exposure to infection are more obvious and dramatic.

The County Tuberculosis Scheme is at present very well organised for giving **treatment** to adult cases of Pulmonary Tuberculosis (except in the provision of female Pulmonary Hospital accommodation); but in common with most other Tuberculosis schemes in this country, the **preventive** side of Tuberculosis work, necessarily a function of the dispensary organisation, is not so well provided for. The provision of sanatorium treatment of the best and most modern kind is essential, both for the welfare of the individual patient and also for the assistance given by the educative factor to prevention in the home on the patient's discharge, but this is not everything. There is no doubt that the tendency in the past has been to hamper the preventive work by the starving of the dispensary organisation of the necessary means of attacking the spread of disease in the patient's home. You cannot make bricks without straw; but fortunately this has been realised in the past year or so and the provision of X-Ray facilities is a big step forward.

There are approximately 450 new cases of Pulmonary Tuberculosis diagnosed every year in the County; there is an average of 4 contacts to every case, of whom roughly one-third ($\frac{1}{3}$) are children under the age of 15 years. Thus there are about 1,800 new contacts "available" every year. With the present personnel, the systematic examination and following up of all these is not possible. A cursory inspection and "laying on of hands" of a large number might look impressive in annual reports, but to those engaged on the work on the spot the weight of numbers is too heavy for intensive investigation! Much, however, may be done by an experienced Tuberculosis officer with intimate knowledge of the personal

and domestic circumstances of the cases, if he has at his hand accurate and time-saving modern methods.

What, then, are the methods of approach most likely to yield results?

Tuberculosis is a disease definitely associated with poverty. The National Association for the Prevention of Tuberculosis published last year the results of an investigation carried out by Dr. F. G. S. Bradbury into the incidence of Tuberculosis in certain Tynside districts entitled "Causal Factors in Tuberculosis." The conclusions crystallise what has been thought by workers in Tuberculosis for years. It would be well to quote some of the conclusions.

"Poverty shows a marked statistical association with Tuberculosis. The chief element of this association is that poverty causes Tuberculosis, rather than that Tuberculosis leads to poverty.

The association of Tuberculosis with poverty is greater than with most of the other factors studied.

Poverty is, therefore, to be regarded as an important cause of Tuberculosis in the areas investigated.

The principal results of poverty which are particularly concerned in leading to Tuberculosis are overcrowding and undernourishment." (Page 74).

The standard adopted was to regard a family as "poor" if it had an income of less than 10s. 6d. per head.

Again: "It is considered that the evidence submitted has sufficient statistical value to establish beyond reasonable doubt that overcrowding is a factor of definite importance in contributing to the prevalence of Tuberculosis in the areas dealt with." Page 32).

The standard of overcrowding adopted was two or more persons per room.

And again: "It is considered that the evidence warrants the statement that undernourishment is a predisposing cause of Tuberculosis." (Page 41).

An analysis of housing conditions of Tuberculous patients in typical areas of Cheshire shows that 40 per cent. of the contacts live in overcrowded conditions (using the standard of overcrowding just given).

In certain of the large industrial areas of the County a considerable percentage (often 30 per cent.) of the insured population is unemployed. A knowledge of Public Assistance Scales of relief indicates that practically all households dependent on unemployment pay, transitional benefit and public

assistance fall below the standard used in the investigation quoted (10s. 6d. per head)—only too often lamentably so.

These are, of course, potent causes of the disease over which the Tuberculosis service has no control whatever, except perhaps to call attention afresh to the fact that they exist and are operating in our midst. But what can be done is to concentrate contact examination on the most susceptible portion of the population, viz., households where there is poverty, overcrowding and undernourishment. The best method of attack would seem to be the selection by the Tuberculosis Officer in the home of the most likely contacts for more intensive and prolonged clinical and radiological observation than has been possible in the past. The real battlefield in the fight against Tuberculosis is in the patient's home.

It might well be anticipated that more intensive work among contacts will increase the number of infected cases discovered. There will probably be an increase in the number of children found to be suffering from definite Tuberculosis, and also, and this is important, others in which there is infection, but in which there is doubt whether notification as cases of Tuberculosis will be justified. The former should receive sanatorium treatment (and here it might be noted that we have at present most inadequate means of providing the most modern methods of treatment to cases of Pulmonary Tuberculosis in children), and the possibility of some of the latter being given short periods of rest and observation in a block attached to a Sanatorium should be considered. The most efficient way would be to establish a children's block at the Cheshire Joint Sanatorium. These "infected" cases will be the reservoir from which many of the future Tuberculosis population will be drawn. In all preventive medicine one should go to the source.

Difficulties are experienced in isolating cases in the patient's home. One may remove children from an infected house to that of a neighbour or relation. This is done at present wherever possible, but is only practicable to a limited degree. Again, one may remove the infected patient to a hospital or sanatorium. Within the past year or two this has been done with expedition in the case of males; owing to the increased efficiency in the control of duration of stay in the Hyde Tuberculosis Pavilion there is now practically no male pulmonary hospital waiting list. Unfortunately this is very far from the case with women. Two or three months' close contact in an overcrowded house between an infectious mother and her children can do a great deal of potential mischief. If the female hospital beds were more centralised and if a Tuberculosis officer had an advisory function as to the duration of

stay in hospital, correlating it with his knowledge of the home conditions, the position would be greatly improved, and probably at no additional expense.

The Tuberculosis Officers at present attempt to deal with poverty and undernourishment by reference of suitable cases to the Local Public Assistance Committees, but the present scale of relief is so low as to render this of very little utility.

Some practical results are obtained by communicating gross instances of overcrowding in Tuberculous households to the local Medical Officer of Health; but there is often the difficulty of the inability of the family to pay the rent of a Council house.

It is interesting and pleasing to quote again from the publication already cited. On page 71 it states: "There is evidence that the incidence of Tuberculosis in families containing children who were supervised in infancy at the maternity and child welfare clinics, is definitely less than in families containing children not so supervised." This branch of the publication already cited. On page 71 it states: "There is evidence that the incidence of Tuberculosis in families containing children who were supervised in infancy at the maternity and child welfare clinics, is definitely less than in families containing children not so supervised." This branch of the County's Public Health work might be producing results in an unlooked-for quarter, although it is possibly because a more intelligent section of the population attends these clinics.

It will be seen that one should approach the problem of the prevention of Tuberculosis on the grounds that it is an economic and an infectious disease. While we might have very little control over the economic aspect, it certainly gives a line as to where to attack the infectious factor. The isolation of a case of small-pox will possibly prevent an epidemic in an entire population; the Tuberculous infection is more subtle and much less immediately obvious in its results, but they are none the less real. Good results have so far been obtained but there is no reason why good should not be made better.

Section VI.-Maternity and Child Welfare.

(By DR. JEAN R. SHAW).

Number of Midwives in Practice.

There were 362 midwives who notified their intention to practise in the County Area during 1933. Classified, these are as follows:—

Actually practising—

Trained, 224; Untrained, 17	241
Monthly Nurses	21
Midwives living outside the County Area	30
In Institutions	29
Had no cases	36
Died	5

There are now only seventeen untrained midwives practising in the County, and several of these attend very few cases, a doctor always being in attendance.

Unfortunately, the “Handy Woman” is still continuing to attend cases, and in one particular area is quite a busy woman.

The County Nursing Association works in close co-operation with the Maternity and Child Welfare officials, and has rendered valuable assistance in all districts where its District Midwives are practising.

Subsidised Midwives.

The County has four subsidised midwives working at Lymm, Tarvin, Hollingworth and Sandbach, respectively. The above midwives are granted £60 per annum and allowed to keep their own fees.

Compensation to Midwives.

34 midwives were compensated during the year for loss of fees owing to poverty or patient being removed to hospital for confinement.

Inspection of Midwives.

The inspection of midwives has been carried out as in previous years by the Lady Assistant Medical Officer, assisted by some of the Health Visitors. The independent midwives are inspected quarterly, and district midwives are visited regularly and inspected twice a year by their own superintendent.

Total visits to midwives	1115
Formal inspections	905
Enquiries into Stillbirths, Puerperal Fevers, Pyrexia, Infant Deaths, etc.	210

The bags and registers of the midwives, with very few exceptions, have been found satisfactory. Although it is not in the rules of the Central Midwives Board, every midwife is advised to have two bags, one to be kept for labour and the other for daily visiting. If the midwife has not been in the habit of using two she very soon sees the advantage of being able to have her labour bag always ready for a new case.

Details of Midwives' Attendance at cases during 1933.

LIVE-BIRTHS.			STILL BIRTHS.			MIS-CARRIAGES.	
With a Doctor.	Without a Doctor.	Total.	With a Doctor.	Without a Doctor.	Total.		
3490	3822	7312 ...	207	71	278 ...	235	

Ante-Natal Work.

Ante-natal visiting has on the whole been fairly well done. The recording of these visits and daily visits during the puerperium in the Central Midwives Board's new ante-natal book involves a good deal of time and skill that is quite beyond many of the older midwives.

Midwives are very appreciative of the County Ante-natal Scheme whereby they can send expectant mothers to be examined by their own doctor.

Midwives' Association.

The Cheshire Midwives' Association was formed in June, 1925, and had its eighth annual meeting in June, 1933, when Miss Ratcliffe, County Superintendent, West Sussex, gave an inspiring and much appreciated address.

During the Session 1932-33, as in previous years, a series of lectures have been given at each of the seven branches. In 1932-33, one midwife (County Nursing Association Nurse) attended a month's Refresher Course at Plaistow Maternity Hospital.

The following notifications have been received under the Central Midwives Board Rules:—

	Medical Help.	Still-Births	Death of a Child.	Laying out of Dead.	Source of Infection.	Artificial Feeding.	Discharge from Eyes.
Trained ...	1962 ...	61 ...	12 ...	80 ...	64 ...	52 ...	74
Untrained ...	79 ...	7 ...	— ...	— ...	— ...	— ...	4

Puerperal Pyrexia.

Ninety-eight cases of Puerperal Pyrexia were notified during 1933. This includes six abortions. The day of onset was as follows: —

1st day—	7 cases.
2nd day—	6 cases.
3rd day—	17 cases.
4th day—	12 cases.
5th day—	11 cases.
6th day—	6 cases.
7th day—	3 cases.
8th day—	6 cases.
9th day—	8 cases.
10th day—	4 cases.
11th day—	3 cases.
12th day—	4 cases.
13th day—	3 cases.
14th day—	2 cases.
15th day—	4 cases.
17th day—	2 cases.

Number of above cases proved to be Puerperal	
Fever	26
Cases already in hospital notified as Pyrexia ...	9
Number sent to hospital for treatment—	
Pyrexia	18
Puerperal Fever	24
Number seen by Consultants	7
Number of deaths of notified cases	8

Disinfection of the midwives in contact with the above cases was carried out in 69 cases.

The following are some of the causes other than Puerperal Fever to which the raised temperature was attributed:—

Kidney Disease, 3 cases.
Pneumonia, 2 cases.
Influenza, 10 cases.
Prolapsed Uterus, 1 case
Rheumatism, 2 cases.
Phlebitis, 5 cases.
Bronchitis, 9 cases.
Mastitis, 10 cases.
Cystitis, 3 cases.
Tonsilitis, 3 cases.
Pyletis, 3 cases.
Abortions, 6 cases.

Nursing and Maternity Homes.

Number on Register at end of 1933	56
Number given up during the year	4
Number of new Homes registered during the year	3
Number of Inspections carried out during the year	197

On the whole the work of Nursing Homes is efficiently carried out. The Inspector has always been well received, and any difficulties arising referred to her.

There have been 574 births in the above Homes, and 490 medical and surgical cases during 1933.

Births, etc., Visitations by the Health Visitors.

With regard to the visiting of births under the Notification of Births Acts, the arrangements have been similar to those of the previous years. On receipt of a notification, the information is immediately forwarded to the Health Visitor responsible for the district in which the birth has occurred. The mothers of the new babies are visited as soon as possible after the tenth day.

During the child's first year of life the Health Visitor's aim is to visit the child at least monthly, but during 1933 the number of visits to babies under one year has worked out at an average of 8 per notified child. Any child, however, who is weakly and requires more frequent visiting gets visited fortnightly or weekly, depending upon the case.

As reported previously, the home visiting at Runcorn is considerably below the average for the other districts. The time of the three Health Visitors stationed there is very fully occupied with School Clinics, Child Welfare Centres, Antenatal Clinics and Tuberculosis Dispensaries. Consequently, the time left for home visiting is very much reduced. Many mothers who want advice about their children will find their way to the "Clinic," but it is in the home visiting that a Health Visitor gets at the careless mother who does not see the necessity, or will not take the trouble, to seek advice about her children. There is no doubt the best preventive work is done in the home.

As stated in a previous report, during 1932 the Maternity and Child Welfare Committee of the Northwich Urban District handed over to the County Committee the Maternity and Child Welfare work of its Urban District. When taken over, the local Centre was open twice a week, and had good attendance at each session. Some alterations were made in the mode of procedure to bring this Centre into line with the other County Centres, viz., all children under 15 months to be

undressed before being weighed, and every child to see the doctor once a month at least, etc. The result was that mothers resented the undressing and stayed away, so that it was found unnecessary to have a Centre more than once a week. At the present time the average attendance is gradually increasing again. The additional Health Visitor appointed by the County Committee has made it possible for much more home visiting to be undertaken. The average number of visits to babies under 1 year during 1933 has worked out at 10 per notified child in Northwich Urban District. This more than counterbalances the lower average attendance at the Centre.

The following is a summary of the visits paid by the Lady Medical Officer and Health Visitors during 1933:—

First visits to Infants under 1 year	5384
Revisits to children under 1 year—Ophthalmia, etc.	32188
Revisits to children over 1 year	44646
Visits to Expectant Mothers	1337
Visits to Midwives	1115

The Method of Feeding Babies.

The following table shows the method of feeding during the first 6 months of their life, of children over 6 months and under one year. There were 944 rural cases and 1484 urban cases:—

	BREAST.					MIXED.					ARTIFICIAL.				
	1929 %	1930 %	1931 %	1932 %	1933 %	1929 %	1930 %	1931 %	1932 %	1933 %	1929 %	1930 %	1931 %	1932 %	1933 %
1st Month— Rural ...	72	74	80	74	74	3	3	1	1	2	25	23	19	25	24
Urban ...	73	73	72	74	75	4	3	5	2	3	23	24	23	24	22
2nd Month— Rural ...	70	71	74	70	70	3	3	2	3	2	27	26	24	27	28
Urban ...	70	69	67	70	71	4	3	5	2	4	26	28	28	28	25
3rd Month— Rural ...	66	65	70	66	64	4	5	3	4	4	30	30	27	30	32
Urban ...	66	63	60	65	61	5	6	6	3	5	29	31	34	34	34
4th Month— Rural ...	61	60	63	60	60	5	6	6	6	6	34	34	31	34	34
Urban ...	62	59	53	60	59	6	7	8	3	5	32	34	39	37	36
5th Month— Rural ...	60	57	55	57	54	6	7	9	6	8	34	36	36	37	38
Urban ...	60	56	50	58	55	7	8	9	4	6	33	36	41	38	39
6th Month— Rural ...	57	55	52	54	51	8	8	10	7	9	35	37	37	39	40
Urban ...	57	56	46	55	52	8	8	10	5	6	35	37	44	40	42

From the above table it is shown that at the end of 6 months 51 per cent. of rural mothers and 52 per cent. urban mothers were able to feed their babies entirely on breast milk; 9 per cent. (rural) and 6 per cent. (urban) had breast milk supplemented with artificial feeding; and 40 per cent. rural babies and 42 per cent. urban babies were artificially fed.

The number of mothers who started and continued for two months to breast-feed their infants is about the same as in previous four years, but during the third month the percentage has fallen much more rapidly. Many of the mothers are most anxious to breast-feed, if only from economical reasons. Possibly the lack of sufficient food for herself and the increased anxiety caused by the continual unemployment of her husband are mainly responsible for her failure to do so.

Health of Infants.

The method of feeding till six months old, and health of children at 12 months old, is shown below (4,311 infants):—

			Good.		Fair		Poor.
			%		%		%
Breast	{ Rural	...	86	...	12	...	2
	{ Urban	...	84	...	14	...	2
Mixed	{ Rural	...	73	...	15	...	2
	{ Urban	...	78	...	18	...	4
Artificial	{ Rural	...	75	...	20	...	5
	{ Urban	...	70	...	23	...	7

The illnesses from which children between 1 and 2 years of age have suffered during the first year of life are shown in the following table:—

			Birth to 3 months.	3 months to 6 months.	6 months to 9 months.	9 months to 12 months.				
Total.			%	%	%	%				
Respiratory										
Diseases	...	10%	...	·4	...	2·6	...	3	...	4
Convulsions	...	·2%	...	·04	...	·05	...	·03	...	·08
Gastro-Enteritis	...	3%	...	—	...	·6	...	1·2	...	1·2
Measles	...	1%	...	—	...	·2	...	·4	...	·4
Whooping Cough	...	2·8%	...	·2	...	·7	...	·9	...	1
Marasmus	...	·3%	...	·3	...	—	...	—	...	—

Health of the Older Children.

In the following table the health of the children at 2 years, 3 years, 4 years, respectively, who have been visited during 1933, are shown:—

Feeding.	Health. 2 years. 4427 children.				Health. 3 years. 4316 children.				Health. 4 years. 4271 children.		
	Good.	Fair.	Poor.		Good.	Fair.	Poor.		Good.	Fair.	Poor.
Breast—	%	%	%		%	%	%		%	%	%
Rural ...	82	16	2	...	82	16	2	...	83	14	3
Urban ...	83	14	3	...	83	15	2	...	83	16	1
Mixed—											
Rural ...	77	20	3	...	77	18	5	...	75	20	5
Urban ...	75	21	4	...	76	21	3	...	78	19	3
Artificially—											
Rural ...	66	29	5	...	70	23	7	...	71	21	8
Urban ...	70	24	6	...	71	24	5	...	71	23	6

Some of the illnesses from which the above children have suffered are as follows:—

	2 years.	3 years.	4 years.
	%	%	%
Respiratory Diseases ...	5	3.5	2.5
Measles ...	2.5	3.5	3
Whooping Cough ...	4	4	3
Scarlet Fever ...	.03	.5	.3
Diphtheria ...	.2	.3	2

Signs of Rickets were noted in 5.3 per cent. of the children between 1 and 4 years of age. 5.1 per cent. were slight, and .2 per cent. were marked.

Vaccination.

Children born in 1932—

Rural areas—

Vaccinated 41.5 per cent.

Exempted 58.5 per cent.

Urban areas—

Vaccinated 44 per cent.

Exempted 56 per cent.

Age at which children born in 1932 walked.

	Urban.	Rural.
12 months and under	32 %	17 %
Over 12 months to 15 months ...	56 %	64 %
Over 15 months to 18 months ...	10 %	14 %
18 months to 2 years	2 %	5 %

It is interesting to note that the urban children are more precocious than the rural children.

Deaths of Infants under one Year.

Table giving particulars of deaths of 86 children under 1 year and over ten days old (53 males, 35 females):—

	Method of Feeding.	10 days to 3 months	3 months to 6 months	6 months to 9 months	9 months to 1 year.
Respiratory Diseases ...	Breast ...	9	1	2	7
	Artificial...	6	4	3	5
Convulsions ...	Breast ...	1	—	—	—
	Artificial...	3	—	1	—
Gastro-Enteritis ...	Breast ...	—	—	—	—
	Artificial...	1	5	—	—
Marasmus ..	Breast ...	—	—	—	—
	Artificial...	2	1	—	2
Whooping Cough ...	—	—	—	—	1
Malformations ...	—	3	—	—	2
Meningitis ...	—	—	—	—	4
Debility ...	—	2	1	—	—
Prematurity ...	—	11	1	—	—
Tabes Mesenterica ...	—	—	—	1	1
Pyloric Stenosis ...	—	2	—	—	—
Syphilis ...	—	1	—	—	—
Overlain ...	—	1	—	—	—
Suffocation ...	—	—	1	—	—
(Inquest)					
Jaundice ...	—	—	1	—	—

Deaths of ~~Infants under 10 days old.~~ OLDER CHILDREN .

Table giving particulars of deaths of 63 children (37 males, 26 females):—

	1—2 years old.	2—3 years old.	3—4 years old.	4—5 years old.
Respiratory Diseases ...	17	4	2	3
Convulsions ...	1	—	—	—
(Inquest).				
Whooping Cough ...	1	2	1	—
Gastro-Enteritis ...	—	—	1	—
Meningitis ...	3	2	—	—
Tubercular Meningitis ...	2	—	2	—
Tabes Mesenterica ...	1	1	—	—
Diphtheria ...	—	1	4	2
Measles ..	1	—	—	—
Accidents {	Drowned ...	1	1	1
	Scalds ...	—	1	1
	Killed ...	—	—	1
	by Motor			
Appendicitis ...	—	1	1	1
Diabetes ...	—	1	—	—
Marasmus ...	1	1	—	—

Deaths of Infants under 10 ^{days} years old.

The following table gives particulars of deaths of 107 infants under 10 days old (59 males, 48 females):—

Premature birth ...	46—20 births attended by Doctor.
	26 „ „ Midwife.
Atelectasis ...	3—3 „ „ Midwife
	(2 Inquests).
Difficult labour ...	16—16 „ „ Doctor.
Feebleness ...	12—9 „ „ Doctor.
	3 „ „ Midwife.
Convulsions ...	8—4 „ „ Doctor.
	4 „ „ Midwife.
Asphyxia ...	2— „ „ Doctor.
Malformations ...	16—10 „ „ Doctor.
	6 „ „ Midwife.
Internal Hemorrhage ...	3—2 „ „ Doctor.
	1 „ „ Midwife.
Jaundice ...	1— „ „ Midwife.

Three of the mothers of the above cases had been working in a factory during pregnancy; 3 others had done charring, etc. Six of the children were illegitimate births. Among the above there were twelve twin pregnancies, only 12 of the 24 children surviving. In 38 cases the babies were first births.

Stillbirths.

The following table gives some particulars of 135 Stillbirths (76 males and 59 females) that have been enquired into, viz.:—

Born before arrival	13 cases.
History of Albuminuria	8 cases.
Ill-health of mother	25 cases.
Malpresentation or difficult labour	36 cases.
History of shock or accident	18 cases.
Cause unknown	9 cases.
Ante-partum Hemorrhage	2 cases.
Placenta Prævia	8 cases.
Cord round neck	3 cases.
Knot in cord	1 case.
Malformation	12 cases.

Forty-eight of the above cases were first births. In fourteen cases there was a previous history of more than one miscarriage or stillbirth, and in ten cases a history of one miscarriage or stillbirth. In seven of these ten cases the stillbirth occurred in the second pregnancy, so that seven of the mothers had not given birth to a live child. Four of the mothers had worked in a factory during pregnancy, and ten others had followed other occupations. Three of the above stillbirths were illegitimate births.

The number of neo-natal deaths and stillbirths occurring among primiparæ brings home the fact more and more forcibly how very necessary it is for all primiparæ to be under skilled attention not only during the ante-natal period but also during their confinement.

Ophthalmia Neonatorum.

There have been notified 49 cases of inflammation of or discharge from the eyes in new-born babies. 36 of the cases were only slight. Most of the cases occurred between the third and fifth days. In 3 cases the birth was attended by a doctor. 46 were attended by midwives.

The following is a description of the cases:—

Slight cases—

One eye affected	18
Both eyes affected	18

Severe cases—

One eye affected	6
Both eyes affected	7

8 of the severe cases were removed to hospital, and 8 others attended by Health Visitors. All the cases made perfect recoveries.

Illegitimate Children.

Special enquiries have been made into the circumstances of 107 illegitimate children born in 1933. In 64 cases the mother was employed. 97 of the cases were found to be quite satisfactorily cared for, 6 only fairly satisfactorily attended to, and 1 not satisfactorily looked after. The father was known to be contributing to the child's maintenance in 53 cases, and in 6 cases it was impossible to ascertain. 41 fathers made no contribution, and 4 of the parents had since got married. 37 of the babies were being brought up by their mothers; 60 principally by grandmothers; 6 by other relatives; 1 child was adopted; 1 went into an Institution; and 1 left the County area.

Expectant Mothers.

During 1933, there were 1,337 visits and revisits paid to expectant mothers. The following interesting points have been noted in 239 of the cases visited during 1933 (the babies being born in 1933):—

Those in good health, 69 per cent.

Those in fair health, 24 per cent.

Those in poor health, 7 per cent.

In all, 13 per cent. were advised to seek medical advice, including three women on account of passing a scanty amount of urine.

17 % suffered from constipation.

46 % had some caries of teeth.

4 % had artificial dentures.

2 % had had extractions.

91 % normal babies (80 per cent. breast-fed; 20 per cent. artificially fed).

5 % not robust.

4 % miscarriage or stillbirth.

Of the 239 mothers, there were 13 primiparæ. 3 mothers gave birth to twins. Only 2 of the mothers were working in a factory during pregnancy. 3 births were illegitimate.

Maternal Mortality. (Per 1,000 total live and stillbirths).

The maternal mortality rate was 4.55, 1.27 from Puerperal Sepsis and 3.28 from other causes.

Maternity and Child Welfare Centres.

During 1933, the County Maternity and Child Welfare Committee became responsible for the small Centres at Bowdon and Partington, both of which had been started and carried on by a Voluntary Committee of local ladies. A fortnightly Centre was also started at Cheadle Hulme.

There are now 35 Centres in the County Area under the County Maternity and Child Welfare Committee, and one Voluntary Centre. The latter Centre is held fortnightly at Utkinton Village Institute, and is maintained by one lady. The good attendance of the mothers shows how much this Centre is appreciated.

The Voluntary Committee at each County Centre has, as in previous years, rendered splendid service during the past year, which has been a very trying one owing to so much unemployment and consequent distress.

Dental Treatment (Expectant Mothers and children under 5 years of age).

By arrangement with the Education Committee this work is undertaken by 8 School Dentists, each devoting one-eighth of his time to this work. The Maternity and Child Welfare Committee pay the cost of one Dentist and Nurse. This year there have been more expectant mothers persuaded to have their teeth attended to.

The following is a summary of the work carried out:—

Number of expectant mothers inspected	25
,, ,, selected	25
,, children inspected	293
,, ,, selected	273
,, ,, treated	268
Total number inspected	318
,, selected	298
,, treated	293
Number of temporary teeth extracted	519
,, permanent teeth extracted	51
Total number extracted	570
Number of temporary teeth filled	91
,, permanent teeth filled	11
Total number filled	102
Number of temporary teeth dressed	13
,, permanent teeth dressed	3
,, scalings	3
,, gum dressings	4

Free Milk Supplied.

During 1933, 757 expectant mothers, nursing mothers and babies have received free milk through the County's scheme for supplying free milk in necessitous cases. A pint of milk or a tin of dried milk per week has been supplied for varying periods of time, depending on the circumstances of the cases.

A list of all cases having free milk is submitted to the Public Assistance Officer.

Tonsils and Adenoids—Ear Disease.

During 1933, the County Maternity and Child Welfare Committee arranged that children under 5 years of age if requiring operation for enlarged tonsils or adenoids should have the same facilities as children of school age; also young children suffering from discharging ears were to be referred to their own doctor, and, if he desired, his treatment could be carried out at the School Clinic.

Maternity Hospitals and Homes.

During 1933, there have been 116 mothers who through the help of the County Maternity and Child Welfare Committee have had their confinements in a Maternity Hospital or Home. Only mothers who through lack of accommodation in their homes or some expected difficulty in their confinement have been eligible for this assistance.

The parents contribute to the cost as much as their circumstances will allow—usually, if they are entitled to a maternity benefit, this amount is claimed.

The confinements have taken place in the following Institutions:—

Liverpool Maternity Home	12
Ashton-under-Lyne Infirmary	26
Chester Maternity Home	1
Clatterbridge Maternity Home	4
Crewe Maternity Home	22
Warrington Maternity Home	16
Warrington General Hospital	1
Widnes Maternity Home	21
Hyde Maternity Home	4
Chester Royal Infirmary	1
Longton Infirmary	7
Walton Infirmary	1

Infant Life Protection: Notification.

Number of foster-parents on Register	104
Number of children on the Register	135

During 1933, the above 135 children have been visited by the Health Visitors within whose area the foster-mothers live. On the whole, the children are well cared for, but in several cases the sleeping arrangements have been found not as satisfactory as could be wished. The foster-mothers have acted on advice given and been willing as far as possible to improve the sleeping arrangements.

In many of the cases the foster-mother receives little or nothing for the child's maintenance, and as she has grown fond of the child goes on providing for him.

There has been no case in which it was found necessary to take proceedings.

Ante-Natal Clinics.

There were in the County Area during 1933 four Ante-natal Clinics. At one of these (Runcorn) there are fortnightly sessions, and the other three have monthly sessions. Each of the Clinics is in charge of a Specialist.

At all the Clinics the midwives attend with their patients, and are present at the examinations.

		Number of Clinics held.		Number of Expectant Mothers.		Number of Attendance.
Congleton	...	12	...	100	...	156
Hoole	...	12	...	65	...	98
Runcorn	...	24	...	180	...	360
Sale	...	12	...	49	...	141

As an example of the work carried out at the Ante-natal Clinics, the following report is submitted:—

RUNCORN ANTE-NATAL CLINIC.

REPORT OF THE CLINIC FOR 1933.

During the year the Clinic has maintained its usefulness. The continued increase in the number of new patients attending shows that the value of its work is becoming more generally accepted by women in pregnancy, practically all of whom who show any abnormal features now attend.

With regard to that important complement of ante-natal care, sound intra-natal management, without which even the most thorough ante-natal work is vitiated, a high standard

has been maintained by the doctors and midwives of the district in co-operation with the Clinic. This is best exemplified by the low stillbirth and neo-natal death rates shown in the figures given below:—

Total Clinics	...	...	24	
New Patients, first visits	...	...	180	
Revisits	...	...	360	
			<hr/>	
Total attendances	...	...	540	(Including 26 patients from the 1932 register).
			<hr/>	

RESULTS.

A. *Delivered at Home—*

Normal vertex	...	...	134
Normal breech	...	...	2
Forceps	...	...	11
Normal vertex after induction			6
			<hr/>
			153

B. *Delivered in the Liverpool Maternity Hospital—*

Normal delivery	...	...	5
(admitted for treatment)			
Forceps	...	...	1
Cæsarean section	...	...	4
Therapeutic abortion	...	...	1
			<hr/>
			11
			<hr/>
Total	...	...	164

<i>Maternal deaths</i>	Total	...	3
			<hr/>

- Pneumonia (undelivered).
- Pneumonia (1 month after delivery).
- General Peritonitis (hydrocephalus, embryotomy).

<i>Stillbirths.</i>	Total	8.	<i>Neo-natal Deaths.</i>	Total	4.
Malformations	...	4	Prematurity	...	2
Maceration, toxæmias	...	3	Cleft palate	...	1
Birth injury, forceps	...	1	Birth injury, forceps	...	1
<i>Total stillbirths and neo-natal deaths</i>				...	12.

Main complications of pregnancy.

<i>Treated at home.</i>			<i>Treated in Liverpool Maternity Hospital.</i>		
Heart disease	...	8	Heart disease	...	1
Toxaemias	...	8	Toxaemias	...	5
Pyelitis	...	2	Fits	...	1
Phthisis	...	1	Recurrent abortions	5	
			and stillbirths.		

P. MALPAS, Ch.M., F.R.C.S.

At Dukinfield there is an arrangement that expectant mothers may attend the Ante-natal Clinic run in connection with the Ashton-under-Lyne Infirmary.

During 1933, the County Maternity and Child Welfare Committee decided to extend to the whole County Area the scheme inaugurated by Dr. Picton at Winsford. Under this scheme the expectant mother is examined twice during her pregnancy by her own doctor, who sends a full report of such examinations to the County Medical Officer. The doctor receives a fee of 10/6d. for all non-insured cases examined. The extension of the scheme came into force towards the latter part of 1933.

Particulars of Reports received during 1933:—

53 cases examined (child born 1933).

36 cases examined (child not born).

89 cases—77 uninsured, 12 insured.

89 cases—37 primiparæ, 52 multiparæ.

9 reported trace of albumen.

6 reported albumen + +

2 reported sugar in urine.

8 reported pyorrhœa.

2 reported pyelitis.

1 reported placenta prævia.

53 cases—44 normal deliveries; 7 forceps deliveries;
1 cæsarean section; 1 induced labour, contracted pelvis.

Six of the above cases were successfully treated for albuminuria, and nine others had a trace of albumen. Two mothers were found to have sugar in the urine. Eight suffered from pyorrhœa.

LIST OF INFANT WELFARE CENTRES.

Centres.	Weekly or Fortnightly.	Day of Meeting.	Consultations held.	Average Attendances.	New Cases.	Total Attendances.
Bollington ...	Fortnightly	Thursday	456	39	38	940
Bowdon ...	Fortnightly	Thursday	141	11	20	367
Bredbury ...	Fortnightly	Tuesday	529	56	63	1384
Cheadle ...	Fortnightly	Tuesday	376	37	76	1040
Cheadle Hulme ...	Fortnightly	Tuesday	258	31	120	731
Compstall ...	Fortnightly	Thursday	509	30	18	731
Congleton ...	Weekly	Monday	1721	52	112	2369
Disley ...	Fortnightly	Tuesday	432	28	22	645
Dukinfield ...	Twice weekly	Wednesday & Thursday	2018	70	193	6920
Grappenhall ...	Fortnightly	Monday	293	15	50	357
Hazel Grove ...	Weekly	Thursday	1218	53	117	2589
Heswall ...	Fortnightly	Monday	315	34	61	804
Hollingworth ...	Fortnightly	Wednesday	361	25	67	592
Hoole ...	Weekly	Tuesday	845	42	111	2038
Hoyle ...	Weekly	Thursday	922	51	133	2531
Lymm ...	Weekly	Tuesday	1230	43	69	2060
Malpas ...	Fortnightly	Tuesday	473	19	31	510
Marple ...	Fortnightly	Tuesday	492	24	33	608
Middlewich ...	Weekly	Monday	1127	35	54	1704
Mow Cop ...	Fortnightly	Wednesday	351	15	27	382
Nantwich ...	Weekly	Monday	687	79	129	3654
Neston ...	Weekly	Thursday	569	60	51	2856
Northwich (Rural) ...	Weekly	Thursday	776	62	123	3084
Northwich (Urban) ...	Weekly	Tuesday	423	29	131	1448
Owley Wood ...	Fortnightly	Tuesday	420	27	61	714
Partington ...	Fortnightly	Thursday	216	20	21	526
Romiley ...	Fortnightly	Thursday	744	52	40	1201
Runcorn ...	Twice weekly	Tuesday & Wednesday	1876	51	284	4856
Sale ...	Twice weekly	Monday & Thursday	2414	51	217	4766
Sandbach ...	Weekly	Tuesday	1325	42	172	2205
Stockton Heath ...	Fortnightly	Monday	525	38	48	951
Tarporley ...	Fortnightly	Thursday	250	10	14	240
Utkinton ...	Fortnightly	Thursday	309	19	20	473
Whaley Bridge ...	Fortnightly	Wednesday	457	39	40	867
Wilmslow ...	Weekly	Tuesday	785	37	63	1839
Winsford ...	Weekly	Friday	525	19	114	947

Artificial Sunlight Treatment.

During 1933, there have been 31 patients under 5 years of age who received artificial sunlight treatment at various Centres. These cases have made a total attendance of 959 during the year.

Maternity and Child Welfare Orthopædic Scheme.

The Orthopædic Scheme, particulars of which will be found in another Section of this Report, is available for all orthopædic cases occurring in children under 5 years of age. During 1933, there were 1,493 attendances of 236 patients at the Clinics, and 17 cases received institutional treatment.

Institutional Treatment of Maternity and Child Welfare Committee Cases.

Ninety children received institutional treatment during 1933—52 boys and 38 girls. Of these cases, 17 were Orthopædic cases, and 73 Medical and Surgical cases.

The following table shows in detail the Hospitals where treatment was carried out, and the conditions from which the children were suffering:—

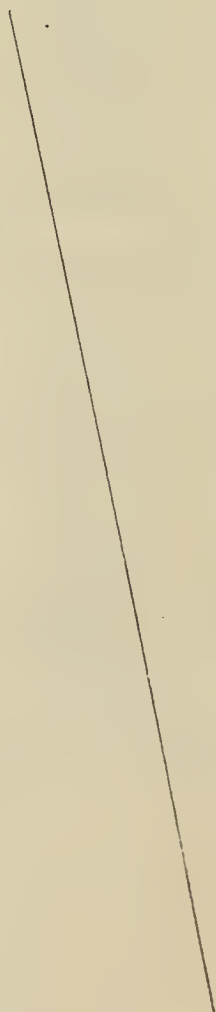


TABLE SHOWING NUMBER OF CASES AFFORDED INSTITUTIONAL TREATMENT UNDER THE PROVISIONS OF THE COUNTY MATERNITY AND CHILD WELFARE SCHEME DURING THE YEAR 1933.

ORTHOPÆDIC.

MEDICAL AND SURGICAL.

Institution.	Number of Cases.		Congenital Deformity.	Club Foot.	Rickets.	Paresis.	Acquired Deformity.	Knock Knee.	Genu Valgum.	Talipes Equino Varus.	Pyloric Stenosis.	Mastoid.	Debility.	Pyrexia.	Bronchitis.	Marasmus.	Hernia.	Albumen in Urine.	Cleft Palate.	Cretin.	Premature Birth.	Dietetic Errors.	Underweight.	Emaciation.	Anæmia.	Fontanelle not closed.	Coeliac Disease.	Malnutrition.
	Boys.	Girls.																										
Robert Jones and Agnes Hunt Orthopædic Hospital, Oswestry	2	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Royal Liverpool Children's Hospital, Heswall	6	5	...	...	2	1	...	...	...	...	...	...	1	...	...	1	2	1	1	1	1	...	...	...	...	...	...	...
Liverpool Open-air Hospital for Children, Leasowe	13	5	1	...	5	...	2	1	1	1	...	...	3	...	2	...	...	...	...	...	1	...	...	...	...	...	...	1
Royal Liverpool Children's Hospital, Liverpool	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
West Kirby Convalescent Home	7	2	...	...	...	...	...	...	...	...	...	1	5	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Royal Manchester Children's Hospital, Pendlebury	2	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hoylake Babies' Hospital	20	25	...	...	...	...	...	...	...	...	...	...	24	...	3	3	...	...	...	...	5	4	2	1	1	1	1	...
TOTALS	52	38	3	1	7	1	2	1	1	1	3	1	34	1	7	4	2	1	1	1	7	4	2	1	1	1	1	1

Average length of stay ... 68·7 days.

Average length of stay ... 95·1 days.

Category	Item	Quantity		Unit	Total
		Qty	Unit		
Food	Wheat Flour	100	kg		100
	Wheat Flour	50	kg		50
	Wheat Flour	25	kg		25
	Wheat Flour	10	kg		10
	Wheat Flour	5	kg		5
	Wheat Flour	2	kg		2
	Wheat Flour	1	kg		1
	Wheat Flour	0.5	kg		0.5
Clothing	Wheat Flour	100	kg		100
	Wheat Flour	50	kg		50
	Wheat Flour	25	kg		25
	Wheat Flour	10	kg		10
	Wheat Flour	5	kg		5
	Wheat Flour	2	kg		2
	Wheat Flour	1	kg		1
	Wheat Flour	0.5	kg		0.5
Medicine	Wheat Flour	100	kg		100
	Wheat Flour	50	kg		50
	Wheat Flour	25	kg		25
	Wheat Flour	10	kg		10
	Wheat Flour	5	kg		5
	Wheat Flour	2	kg		2
	Wheat Flour	1	kg		1
	Wheat Flour	0.5	kg		0.5
Other	Wheat Flour	100	kg		100
	Wheat Flour	50	kg		50
	Wheat Flour	25	kg		25
	Wheat Flour	10	kg		10
	Wheat Flour	5	kg		5
	Wheat Flour	2	kg		2
	Wheat Flour	1	kg		1
	Wheat Flour	0.5	kg		0.5

MATERNITY AND CHILD WELFARE.

Table showing number of patients attending for Artificial Sunlight Treatment during the year 1933:—

Institution.	No. of Patients attending.	No. of Attendances.	Average No. of Attendances.
Glossop Sunlight Clinic ...	1	2	} 31
Hyde Orthopædic Clinic ...	10	164	
Macclesfield General Infirmary	1	20	
Mid-Cheshire Orthopædic Clinic, Northwich	14	565	
Warrington Infirmary... ..	5	208	
	31	959	

The following table shows the number of patients attending the various Orthopædic Clinics in the County, together with the number of patients discharged during the year, and also the total number of attendances made by such patients:—

Clinic.	No. of Patients on Registers 1/1/33.	No. of Patients admitted during the Year.	No. of Patients discharged during the year.	No. of Patients on Registers 31/12/33.	Total No. of Attendances.
Alderley Edge ...	4	1	1	4	12
Altrincham ...	50	13	13	50	413
Chester ...	12	6	8	10	75
Crewe ...	19	14	15	18	108
Ellesmere Port ...	43	31	34	40	55
Hoylake ...	6	7	2	11	114
Hyde ...	4	5	7	2	116
New Ferry ...	59	40	59	40	246
Runcorn ...	27	31	19	39	288
Stockton Heath ...	12	10	11	11	66
	236	158	169	225	1493

Section VII.-County Veterinary Service.

Veterinary Inspection of Cattle.

The County Veterinary Staff, which forms a section of the Public Health Department, consists of one Chief and five Assistant Veterinary Officers. As the Assistant Veterinary Officers commenced duties on October 1st, 1933, it is only possible to indicate the work undertaken by them for the last quarter of the year. It is amply evident, however, that the County Council's decision to appoint a whole-time Veterinary service has been fully justified. The duties of the Veterinary Staff embrace all veterinary work under the Tuberculosis Order of 1925, and all veterinary duties imposed by the Milk and Dairies Acts and Orders.

The administrative area has been divided into five inspectorates, each one of which forms a more or less complete unit in itself. Each officer is provided with a microscope, stains and equipment, together with a small allowance for the provision and upkeep of a laboratory where samples of milk, sputum, etc., are regularly examined.

Milk and Dairies Order, 1926.

Part IV. of the Milk and Dairies Order lays down that every County Council and County Borough Council shall cause to be made such inspections of cattle as may be necessary and proper for the purposes of the Act and of this Order.

After the County Veterinary Service had been in active operation for the last quarter of the year, it was estimated that with the present staff each farm in Cheshire can be inspected once a year, and although these inspections will prove of great value it must be emphasised that the clinical examination of the herds once a year is insufficient. Experience has proved that to secure the full benefits of routine veterinary inspection a quarterly inspection is necessary. The main function of the Veterinary Officer under the Order is the detection and elimination of cattle suffering from those forms of tuberculosis defined in the Tuberculosis Order of 1925. but in addition each Officer is expected to give advice in matters relating to clean milk production, the early recognition of tuberculosis, etc. To make real headway, it is essential that the active support and goodwill of the farmer be gained, and it is with great pleasure that one can report that the farmers of Cheshire have, practically without exception, proved to be most considerate and helpful to the Veterinary Staff. The Table shows the work done for the quarter under the Order.

Milk and Dairies (Consolidation) Act, 1915.

Under Section 4 of the above Act any Medical Officer of Health finding a sample of milk produced in the County area to contain tubercle bacilli must give notice to the County Medical Officer of Health, whose duty it is to arrange for veterinary inspection of the cattle in the herd where the milk is produced. On receipt of such notice the County Medical Officer of Cheshire informs the Chief Veterinary Officer, who arranges the inspection of the cattle on the farm concerned. Individual samples of milk are taken from any cows showing clinical evidence of Tuberculosis of the udder, and the milk from the rest is occasionally grouped, or more usually one control sample is taken.

During the year 1933, the following neighbouring Authorities notified farms as under:—

Birkenhead	27	Stockport	5	Stafford	1
Salford	20	Stoke-on-Trent	1	Newton-in-	
Liverpool	20	Stretford	8	Makerfield	1
Manchester	71	Widnes	3	Oldham	4
Warrington	6	Swinton	1	Derbyshire	2
Eccles	4	Birmingham	1	Preston	3
St. Helens	2				

During the year, Sanitary Authorities within the County took 1,263 samples, and of these 96 proved positive, a percentage of 7.

Human Tuberculosis.

The County Medical Officer of Health has arranged that in all reported cases of Non-Pulmonary Tuberculosis of human beings the patient's milk supply should be investigated. In cases where it is possible a veterinary inspection of the suspect herd is made, and if no diseased animal is found a bulk sample of the milk is taken for biological examination. Thirteen farms were reported under the heading, at four of which tubercular cows were discovered.

It is realised that in many cases a considerable time may have elapsed since infection of the patient and the manifestation of clinical symptoms, and in these cases it is unlikely that the offending cow will be found.

Milk (Special Designations) Order, 1923.

There are at present fifty-five farmers licensed to produce Grade A Milk (36 holding Producers' and Bottling Licences, and 19 Producers' Licences only). There are 15 farmers licensed by the Ministry of Health to produce Certified Milk and 8 licensed for Grade A (Tuberculin Tested) Milk. The

cows on each of the Grade A farms are clinically examined quarterly by a member of the Veterinary Staff, who, at the time of each inspection, takes a bulk sample of the milk and submits it for biological examination, in addition to the ordinary bacterial count. A bulk sample of milk from each of the Grade A farms is taken twice a year for examination for tubercle bacilli.

Microscopic Examination.

Microscopic examinations of milk, sputum and other suspected material are constantly being carried out by each member of the Veterinary Staff, and the value of these examinations is becoming increasingly evident. The vast majority of tuberculous milk samples from individual cows are now detected within an hour or so of the sample being taken, and, apart from the considerable financial saving effected, the fact that the offending animal is eliminated with the utmost despatch is of importance from a public health point of view.

From experience gained in this County it is thought that over 90 per cent. of infected milk samples from individual cows can be detected by careful microscopic examination.

No. of Cows Exam.	No. Dry or Sold.	No. of Cows found T.B. from Clinical Exam. (plus Micro).	SECOND VISIT.					No. of Cows found T.B. on Biolog. Exam. after negative Microscopic.	No. of Cows notified but not found T.B.						
			Biolog. Samples.	Positive Result of Biolog. Samples.	No. of Cows Exam. on second visit.	No. Dry or Sold.	No. of Cows found T.B. from Clinical Exam. (plus Micro).								
Notified under Tuberculosis Order:—															
9751	2270	247	..	9	..	1	..	..	248	2	84		
Notified under Section 4 of the Milk & Dairies Act, 1915 :—															
10181	1191	144	557	226	87	49	1340	70	28	132	88	24	12	6	..
Routine Inspections :—															
18858	4551	54	71	34	4	4	80	8	1	10	2	59	..
38790	8012	445	628	269	91	54	1420	78	29	142	90	24	12	8	84

Dairies and Cowsheds.

In the Order made under Parts 5 and 6 of the above Act general provisions are laid down for the securing of cleanliness of Dairies and the protection of milk against infection and contamination.

These provisions as stated above are in fact "general," no definite standard having been defined, with the result that in a County such as Cheshire, with many Sanitary Authorities, no two Authorities had an agreed standard on which to work. It was obvious therefore that in a large milk producing County some degree of uniformity was essential. To obtain this uniformity a memorandum on the production of clean milk, the erection of new and the reconstruction of old cowsheds was drawn up, agreed to by the Committees concerned and circulated to every Sanitary Authority in the County. The following instructions for the erection of new cowsheds were incorporated in the memoranda, and are set out as follows:—

NEW COWSHEDS.

In the case of all new cowsheds to be built, or old sheds remodelled, the following details are given to assist in the provision of a suitable cowshed:—

Air Space.—600 cubic feet per cow.

Lighting.—3 square feet of window space per cow.

Roof lighting is an advantage in addition.

Ventilation.—This is best provided by forming the upper portion of the wall windows in the form of a glazed hopper, to fall inwards. Outlets can be formed by raised ridge tiles. Holes in walls are draughty unless a deflection board is fixed on the inside.

Size.—(Internal).

<i>Single Row Cowshed.</i>	<i>Minimum.</i>
Feeding passage	3ft. 6in.
Feeding trough	1ft. 9in.
Standings	5ft. 3in.
Dung channel	2ft. 0in.
Minking orrear passage	5ft. 0in.
Total	<hr/> 17ft. 6in. <hr/>

In the case of a double-row cowshed having two **feeding** passages and one central **milking** passage, the minimum width is 32 ft. 6 ins.

Width.—Allow 7 feet for each double stall and 4 feet for each single stall.

Walls.—Should be of brick, stone or concrete, and the internal surface of the walls to a height of 5 feet 9 ins. should be rendered in cement to form a dado.

The low wall at the head of the feeding troughs, if formed of brick or stone, should be rendered in cement on the trough side.

Wooden walls for new cowsheds should not be permitted.

Windows.—Should allow a minimum of 3 square feet per cow. The windows are best formed as a glazed hopper, the lower third of the window being fixed and the upper two-thirds forming a **glazed** hopper, and made to fall inwards.

Roof lighting is very good, in addition to the ventilating windows.

Roof.—Should be covered with slates or asbestos. Raised ridge tiles provide an extra means of ventilation.

Feeding Troughs.—Should be made of glazed earthenware or concrete with rounded corners. Where half pipes are used, they should be tilted up at the back and bedded in concrete.

Stall Divisions.—(Boskins). Should be made of concrete or galvanized iron tubing.

Floors.—Should be formed of some durable and impervious material without joints such as concrete, finished with a "brush finish." It is advisable to pave the whole of the stall floors up to the troughs. Some cowkeepers object to paving the standings up to the trough, but this practice of complete paving tends to greater cleanliness.

The Heelstone.—Should not be less than 5 inches in height.

The Dung Channel.—Should be two feet wide.

The whole of the floor should have a slight fall to one or more outlets according to the length of the shed and formed so as to discharge any liquid on to a properly trapped gulley outside, connected to a suitable drain.

Water Supply.—If sufficient water is available, it is advisable to have the water laid on to a tap at the head of the dung channel or hollow, for the purpose of daily swilling of the floor.

Automatic drinking bowls for the cows are a great asset.

Paving.—If the whole yard is not paved, at least a good concrete footpath should be provided for cleanly access to the shed.

Manure Dump.—The manure dump should be placed well away from the shed or dairy in such a position that the cows do not walk into it.

The dump should have a concrete floor and dwarf walls on three sides. The inner surface of the walls should be smooth and free from “pockets.”

The liquid from the dump should be capable of being collected for use.

The use of a “throwing out” door in the wall of the cowshed is not satisfactory.

Cesspool.—Where a cesspool has to be used to receive the drainage and the ground where the cesspool is placed has a good slope, a satisfactory method of emptying the cesspool is by means of a 4-inch pipe (with a controlling valve) laid from the bottom of the cesspool until, with a normal fall, the pipe track comes well above ground. The tank can then be emptied by the valve and pipe straight into a sludge cart without pumping. A cesspool need not be deep. An oblong or rectangular tank, having a “V” bottom, fitted with a sludge valve similar to a modern sewage disposal works tank is quite satisfactory.

It will be noted that the dimensions given in the memorandum for the construction of new cowsheds are based on the standards set out by the Ministry of Agriculture with slight internal alterations, and as this was the standard already adopted by the Agricultural Committee for the erection of small holdings it was deemed desirable by the Milk and Dairies Committee to adopt the same for the sake of uniformity. I am of the opinion, however, that this standard is too low, and should be considered as an absolute minimum.

Section VIII.-Food and Drugs (Adulteration) Act, 1928.

During the year ended 31st December, 1933, a total of 1,424 samples, comprising 1,266 foods and 158 drugs, were submitted for analysis to the County Public Analyst.

Of the foods, 904 were milks, of which 69 were reported as not being up to standard—being either adulterated with water or deficient in milk-fat. Twenty-five other samples were reported against, consisting of three whiskeys containing from 7 per cent. to 11.8 per cent. of excess water, six sausages containing varying amounts of SO_2 , and four mercury ointments which were deficient in mercury. Other samples not up to standard consisted of distilled water, magnesia (calcined), cake, cream, malt vinegar, coffee, “grey powder” and magnesia.

Legal proceedings were instituted in nine cases of milk deficient in fat, and in two cases of added water. In six of these cases the defendants were either fined or ordered to pay the costs of the prosecution. The other five cases were dismissed on the defendant proving to the Magistrates that the milk was sold as it came from the cow. (*Hunt v. Richardson*).

As the result of the remaining cases where proceedings were instituted the seller of whiskey containing 11 per cent. excess water was fined £5 and 10/6d. costs, the seller of cream containing boric acid was fined £5 and 10/6d. costs, the seller of coffee containing 45 per cent. of chicory was ordered to pay £1 0s. 6d. costs, two sellers of sausage containing SO_2 were each fined £1 11s. 0d., and the seller of mercury ointment which was deficient in mercury to the extent of 61.6 per cent. was ordered to pay 14/6d. costs.

In all other cases where legal proceedings were not taken the sellers were cautioned.

Full details of all the samples obtained have been supplied to the Ministry of Health.

Section IX.-Mental Deficiency.

At the end of the year 1933, there were 158 defectives being maintained in Institutions, apart from six cases in "places of safety" and seven out on licence.

There were 654 cases under supervision. This supervision is carried out by the Health Visitors, who visit each case a number of times during the year, and report quarterly as to their visits.

More institutional accommodation is required, and until the extensions at Cranage Hall are made this defect cannot be remedied.

There are no Occupation Centres in the County.

The methods of ascertainment are the same as in previous years. Every effort is made to obtain particulars of all mental defectives in the County. Health Visitors, District Nurses, Relieving Officers, Head Teachers, parents and various officials report cases.

PARTICULARS OF MENTAL DEFECTIVES

(as on 31st December, 1933).

A. Number of Cases "Subject to be dealt with":—

	M.	F.	T.
1. Under "Order":—			
(a) (1) In Institutions (excluding cases on Licence—			
Under 16 years of age ...	9	10	19
Aged 16 years and over ...	70	69	139
(2) On Licence from Institutions—			
Under 16 years of age ...	—	1	1
Aged 16 years and over ...	2	1	3
(b) (1) Under Guardianship (excluding cases on Licence—			
Under 16 years of age ...	—	—	—
Aged 16 years and over ...	1	1	2
(2) On Licence from Guardianship—			
Under 16 years of age ...	—	—	—
Aged 16 years and over ...	—	—	—
2. In "Places of Safety"—			
Under 16 years of age ...	2	3	5
Aged 16 years and over ...	1	—	1
3. Under Statutory Supervision	339	315	654
4. Action not yet taken under any of the above headings:—			
(a) Notified by Local Education Authorities (Sec. 2 (2))	—	—	—
(b) Mental Defectives in receipt of Poor Relief—			
(1) Institutional—			
(a) In Public Assistance Institutions not approved under Sec. 37 ...	30	30	60

(b) In Institutions certified under the M.D. Acts (including those approved under Sec. 37)—			
(1) Cases "placed" under Sec. 3	7	13	20
(2) Other Cases	5	9	14
(2) Domiciliary	37	49	86

B. Number of Cases who may become "Subject to be dealt with":—

1. In Institutions or under Guardianship—dealt with under Sec. 3:—

(a) In regard to whom the Local Authority contributes under its permissive powers	1	1	2
(b) Maintained wholly by parents, relatives or others	35	17	52

(A number of Cases may not be known to us).

2. Reported to the Local Authority from any reliable source, but as to whom no action has been taken	—	—	—
3. Under Voluntary Supervision	—	—	—

The following table gives details of the various Certified Institutions where defectives were being maintained by the Council at 31st December, 1933:—

	M.	F.	T.
<i>Institution provided for defectives by Cheshire Joint Board—</i>			
Cranage Hall	—	31	31
<i>Institution provided for defectives by other Local Authority—</i>			
Calderstones (Lancashire Mental Hospitals Board)	3	—	3
<i>Other Certified Institutions for defectives—</i>			
Dovecot, Knotty Ash, Liverpool	—	1	1
Gillibrand Hall, Chorley	—	2	2
Mary Dendy Home, Sandlebridge, Alderley Edge	17	8	25
Royal Albert Institution, Lancaster	26	4	30
Royal Earlswood Institution, Redhill	1	—	1
St. Raphael's Colony, Brentford	1	—	1
Stoke Park, Bristol	11	5	16
Whittington Hall, Chesterfield	—	3	3
<i>Certified Public Assistance Institutions—</i>			
Arclid House, Sandbach (Cheshire C. C.) ...	2	2	4
Burton House, Sedgeley (Staffordshire C.C.)	2	—	2
The Lodge, Caerwys, (Montgomeryshire C.C.)	2	4	6
St. James' Hospital, Hoole, (Chester C. B.)	—	9	9
Seafeld House, Seaforth (Lancashire C. C.)	2	—	2
Shaw Heath Hospital, Stockport (Stockport C. B.)	1	1	2
Tarvin House, Chester (Cheshire C. C.) ...	14	12	26
Total	82	82	164

Section X.-Welfare of the Blind.

General.

The requirements of the Blind Persons Act, 1920, are met by the Council in its revised Scheme for the Welfare of Blind Persons, dated May 1931. The provisions of this Scheme are executed, subject to the general administrative supervision of the Blind Persons Inter-Sub-Committee of the Council, by the Blind Welfare Societies at Chester, Ashton-under-Lyne and Macclesfield, which receive annual grants in accordance with the Scheme of the Minister of Health under the Local Government Act, 1929. The closest co-operation is maintained with these Societies, and the various services rendered by them continue to be entirely satisfactory.

Certification.

To ensure that no person's name is placed on the register without the certificate of a medical practitioner with special experience in ophthalmology, all applicants are examined by the County Oculist, Dr. W. Dunlop Hamilton.

Statistics.

Number of Registered Blind Persons in the County at 31st March:

	1933.	1934.
Under 5 years	1	0
5—16 years	26	25
16—21 years	27	19
21—30 years	36	46
30—40 years	77	75
40—50 years	91	98
50—60 years	140	139
60—70 years	211	224
Over 70 years	242	271
Total	<u>851</u>	<u>897</u>

Registered Blind Persons in County employed, being trained, or otherwise at 31st March:

	1933.	1934.
Employed		
} in Workshops	6	6
} as Home workers	50	43
} variously	42	44
Being trained	12	13
Trained but unemployed	16	13
Unemployable	688	747

Workshop Employés.

Annual grants are made at the rate of £40 a year to recognised Workshops for each new Cheshire entrant, other than persons accounted for in the annual grant under the Local Government Act Scheme to the organization concerned. There was one such new entrant in 1933, and one Cheshire worker ceased.

Home Workers.

The three voluntary societies arrange for the employment at home of those capable of it and for augmentation of their earnings. Further augmentation is given when necessary by the Council.

Homes' Residents.

Annual grants in accordance with the Local Government Act Scheme are paid to several organizations, subject to the same services continuing to be rendered on behalf of Cheshire residents in Homes for the Blind: additional capitation grants of £13 a year are occasionally made for new entrants, whose weekly income is augmented if necessary to enable them to meet the maintenance charges. At the end of 1933 there were 5 Cheshire residents, including 1 admitted during the year, being so maintained in the Homes of the Manchester and Salford Society at Pendleton, 2 in the Homes of Henshaw's Institution at Old Trafford, and 1 at the Home of the National Institute for the Blind at Hastings.

National Library for the Blind.

Grants at the rate of £40 a year each were made in 1933 to the National Library for the Blind on behalf of 2 Cheshire Home Workers who were Blind Copyists for its northern branch, apart from the usual annual grant for general services, which are used by slightly over 100 Cheshire residents.

Other Services.

The usual annual grants were continued in 1933 to the National Institute for the Blind and the North-Western Counties Association for their respective national and regional services.

Wireless Certificates.

100 Certificates entitling the recipient to a free wireless licence were issued in 1933 to applicants on the register.

Necessitous Blind.

The unemployable are naturally by far the largest part of the registered blind population, and many of them are in need of financial help. In its Scheme under the Local Government Act, 1929, the Council made a declaration that all assistance to necessitous blind persons should be henceforth provided by virtue of the Blind Persons Act and not as Poor Relief. The Council's Scheme for Domiciliary Assistance, dated February 1931, provides that the income of every adult registered blind person be augmented where necessary to between 17/6d. and 25/-; and that of a married blind couple to between 30/- and 45/-, according to circumstances.

In 1933, grants were made in 121 cases, and withheld in 12. Grants which ceased numbered 57. In addition, 13 grants in respect of sighted dependants were assigned on behalf of the Public Assistance Committee, and 1 such grant ceased. There are now 479 weekly grants received by blind persons in the County, and 34 by sighted dependants.

Section XI.-Public Assistance Institutions.

Public Assistance Institutions.

A report as to the future usage of the various Hospital Blocks of the Public Assistance Institutions is at present under consideration by the Committee. One very important step, however, has been decided upon, *i.e.* the appropriation of Clatterbridge Institution as a Hospital under the Public Health Committee. Extensive alterations and improvements will, of course, be necessary, and these are under consideration at the moment.

The old Hospital Block at Arclid Institution has been adapted to accommodate 14 very low-grade mentally defective children and 16 high-grade males. This is only a temporary measure to secure urgently needed accommodation until Cranage Hall is ready to provide it.

Treatment of Cancer Cases.

Arrangements for treatment of Cancer cases have been made with the Chester Royal Infirmary. Treatment is also carried out at the Clatterbridge Institution.

The following table shows the work of the various Institutions and accommodation:—

	Arclid	Clatterbridge	Dutton	Knutsford	Macclesfield	Nantwich	Northwich	Tarvin	Totals
Infant and Maternity Beds ..	88	291	72	172	161	134	50	26	994
Admissions and Births ..	160	1674	113	387	534	420	75	50	3413
Confinements	3	203	7	13	79	16	4	1	326
Still Births	3	192	7	13	74	11	4	1	305
Deaths	27	189	30	106	105	68	44	7	576
Patients Discharged	118	1486	88	272	429	350	41	27	2811
Patients staying 4 weeks or less	60	1134	61	213	373	275	29	23	2168
4—13 weeks ..	52	374	22	78	75	104	26	8	739
over 13 weeks ..	45	167	35	87	86	39	30	3	492
Average No. of Beds occupied	56	317	61	130	206	104	36	18	928
Highest No. of Beds occupied	72	368	73	149	230	115	42	21	1070
(Date) ..	7/xii	18/iii	3/i	10/ii	17/vi	28/i	28/i	11/ii	—
Lowest No. of Beds occupied ..	47	289	53	122	176	86	27	16	816
(Date) ..	9/vi	15/x	27/xii	26/vi	7/i	17/x	17/vi	11/xii	—
Surgical Operations	12	410	—	20	—	20	—	—	462
Abdominal Operations ..	—	140	—	—	—	6	—	—	146

The following improvements were carried out during the year:—

ARCLID.

1. New sinks in hospital kitchen.
2. New bath—male hospital.
3. Alterations to fireplaces.
4. Provision of steam disinfecter.
5. New sanitary annexes for male and female inmates.
6. Re-organisation and re-equipment of laundry.
7. Various minor works incidental to disinfection of casual wards.
8. Conversion of store rooms into dining room for casuals.

CLATTERBRIDGE.

1. New fish frying range in kitchen.
2. Repairs to casual wards.
3. Formation of playground for children's block.
4. Painting, redecorating and repairs at Hoylake Children's Home.

DUTTON.

1. Improvements to men's day room.
2. Improvements to steam supply to kitchen and Laundry.
3. Installation of power-driven plant in laundry to replace hand-power plant.
4. Installation of hot plate, new range and sinks in kitchen.
5. Provision of new heating boiler for domestic hot water.
6. Internal painting to hospital and main block.

KNUTSFORD.

1. Repairs to chimneys.

MACCLESFIELD.

1. New sink in hospital kitchen.
2. Repairs to chimney shafts.
3. Improvements and extensions to casual wards, including bathroom, examination room, dressing rooms, day rooms and dormitory.

NANTWICH.

1. New range in male and female hospital kitchens..
2. New dining room for casuals.
3. New drying room, and locker room for casuals.
4. Extensions to and re-equipment of kitchen.
5. Installation of extra power-driven plant and new conveyor-type dryer in laundry.
6. New work shed for casuals. •

NORTHWICH.

1. Extension to casual wards, including new day-room, provision of new bathrooms, lavatory accommodation, etc.
2. Provision of steam disinfecter.
3. Equipment of laundry with power-driven plant to replace hand-power plant.
4. Extensions to kitchen and dining room and equipment of kitchen with gas-fired range, new sinks, etc., and also erection of cold store.

TARVIN.

1. Minor improvements in kitchen—provision of new sinks, etc.

Section XII.-Sewerage and Sewage Disposal.

MUNICIPAL BOROUGHES.

CONGLETON.

The scheme for the extension and modernisation of the Sewage Disposal Works is now completed. The works have been designed to deal with a population of 16,000, with a dry weather flow of 500,000 gallons per day, three times the dry weather flow being dealt with as sewage proper and the same volume as storm water.

The re-constructed works consist of Detritus Tanks in duplicate, provided with hand-operated screen and mechanical elevators, three sedimentation tanks having a total capacity of 16 hours' dry weather flow, twelve dosing chambers provided with dosing apparatus for the regulation and distribution of sewage on to fourteen circular percolating filters, humus tanks in duplicate, storm tanks, sludge drying beds and electrically driven pumping plant.

A sample of the effluent from these works has been classed as entirely satisfactory.

The County Council Public Health Committee has called the attention of the Town Council to the necessity for the provision of sewerage facilities in the Astbury Marsh district, where there are some 80—90 houses without sewerage facilities.

CREWE.

The Sewage Disposal Works consist of screens, detritus tanks, sedimentation tanks, percolating filters, humus tanks and storm tanks. Periodical samples of sewage effluents from these works have been reported as satisfactory.

HYDE.

These works are operating at full capacity, and additional land is required for the extension of the works. Application has been made to the Ministry of Health for a loan for the acquisition of land.

MACCLESFIELD.

The extensions to these works were completed in May: these consist of additional dredging and screening machinery, an improved storm overflow, three new settling tanks, four 98' dia. bacteria beds, four 105' dia. bacteria beds, four

humus tanks, a new flow recorder and an additional outlet main, together with the necessary dosing chambers, valves, etc.

The works as now completed are capable of dealing with a daily dry weather flow of approximately $1\frac{3}{4}$ million gallons.

DUKINFIELD.

STALYBRIDGE.

The sewage of these Districts is received and treated at the works of the Dukinfield and Stalybridge Joint Sewerage Board, which are supervised by the Mersey and Irwell Joint Committee.

URBAN DISTRICTS.

ALSAGER URBAN DISTRICT.

No important extension of the sewerage system has been undertaken during the year.

Development in Lawton Road is proceeding: fifteen houses are in course of erection, each with its own septic tank and filter bed. No nuisance has yet been apparent in the boundary brook into which the effluent is discharged.

The extensions to the sewage disposal works, completed in 1932, have proved satisfactory, and the works are now capable of dealing with the increased burden imposed by the conversion of privies to the water carriage system and the additional houses which have been built.

It has been found, however, that a new sludge drying bed is required owing to the excessive dilution of the sludge which is necessary for gravitation purposes, and the difficulty of dealing with this excess of water in the bed. Sanction of the Ministry of Health has been obtained for an additional sludge drying bed, which will be constructed as soon as the season permits.

Samples of effluent examined by the County Analyst have been reported as satisfactory.

ALDERLEY EDGE URBAN DISTRICT.

Sewage is treated by means of sedimentation tanks and land irrigation. The works are supervised by the Mersey and Irwell Joint Committee.

ALTRINCHAM URBAN DISTRICT.

These sewage works, consisting of sedimentation tanks and land irrigation, are supervised by the Mersey and Irwell Joint Committee.

BEBINGTON URBAN DISTRICT.

A Ministry of Health Inquiry was held at Bebington on the 20th December, 1933, into an application by the Bebington Urban District Council for sanction to borrow £112,384 for works of sewerage and sewage disposal.

The scheme generally consists of the provision of new sewers to replace existing sewers, which will in some instances be retained as storm overflows, a storm water relief sewer in the north-west area, an intercepting sewer and a new outfall sewer.

New sewage disposal works included in this scheme will consist of screens and detritus tanks, sedimentation tanks, sludge pump wells and pumps, and sludge drying beds.

Sufficient land is to be acquired to permit of full treatment works being constructed in the event of any such recommendation being made in the future by the Special Committee which is at present engaged in an investigation of the effects of sewage discharged into the River Mersey.

Eastham Sewage Works.

These works were taken over from the late Wirral Rural District Council on the 1st April, 1933, in an unsatisfactory condition. Work is in progress on alterations and extensions. The completed works will consist of two primary and two secondary sedimentation tanks, dosing chamber, 50ft. dia. sewage filter, and two humus tanks. The media in the two existing filter beds is being renewed.

BOLLINGTON URBAN DISTRICT.

The system of sewage disposal consists of sedimentation tanks, percolating filters, humus tanks and storm tanks.

No complaints were received from the Mersey and Irwell Rivers' Board during 1933 in respect of the effluent.

BOWDON URBAN DISTRICT.

The sewage works consist of sedimentation tanks and land irrigation. The works are supervised by the Mersey and Irwell Joint Committee.

The proposed installation of two additional tanks and filters to meet the increasing requirements of the area is under consideration.

BREDBURY AND ROMILEY URBAN DISTRICT.

Bredbury sewage works consist of precipitation tanks, percolating filters, humus tanks, and storm tanks.

Romiley sewage works consist of sedimentation tanks, continuous filters and land, storm tanks and filters.

Both works are supervised by the Mersey and Irwell Joint Committee.

It is anticipated that a comprehensive scheme for combining both these works will be commenced during the year 1934.

BUGLAWTON URBAN DISTRICT.

The sewage of the portion of the Urban District adjacent to the Borough of Congleton is received and treated at the sewage works of Congleton Municipal Borough.

CHEADLE AND GATLEY URBAN DISTRICT.

Work is nearing completion on the construction of a joint sewer which is intended to convey the sewage of the Urban District to the sewage disposal works of Manchester Corporation.

When this sewer is completed and in operation the existing sewage works of the Urban District Council will be abandoned.

ELLESMERE PORT URBAN DISTRICT.

Work is now completed on the scheme of sewer extensions, the reconstruction of Ellesmere Port sewage works, and the construction of a new main sewage disposal works in the parish of Little Stanney.

HALE URBAN DISTRICT.

The sewage works consist of activated sludge tanks and storm tanks. Seventy-five per cent. of the sewage of the Urban District is dealt with at these works.

Sewage from the northern portion of the Urban District is received and treated at the sewage works of the Altrincham Urban District Council, by agreement.

The works are supervised by the Mersey and Irwell Joint Committee.

HANDFORTH URBAN DISTRICT.

The Urban District is without any sewerage facilities or sewage disposal works. As a result of development, serious pollution of water-courses by domestic sewage is taking place, which has given rise to frequent complaints.

A scheme is being prepared for the sewerage of Handforth to the existing disposal works of the Wilmslow Urban District Council, which are to be enlarged and reconstructed.

HAZEL GROVE AND BRAMHALL URBAN DISTRICT.

Hazel Grove sewage works consist of screens, detritus tanks, sedimentation tanks, percolating filters, humus tanks, storm tanks and sludge drying beds.

Bramhall sewage works consist of septic tanks, precipitation tanks, continuous filters and sludge drying lagoons.

Both works are supervised by the Mersey and Irwell Joint Committee.

HOLLINGWORTH URBAN DISTRICT.

The sewage works consist of precipitation tanks, continuous filters, and land irrigation. The works are under the control of the Mersey and Irwell Joint Committee.

HOYLAKE URBAN DISTRICT.

The sewage of this Urban District is discharged into tidal waters: at Hoylake and Meols there are retention tanks with penstock valves, so that discharge takes place only on the ebb-tide.

KNUTSFORD URBAN DISTRICT.

The sewage works consist of sedimentation tanks, percolating filters, humus tanks, storm tanks, and land irrigation. Six samples of effluent taken by the Mersey and Irwell Joint Committee were classed as satisfactory.

LYMM URBAN DISTRICT.

The Urban District is divided into two drainage areas. Sewage is treated at the Sow Brook Works by precipitation tanks and land filtration, and at the Statham Sewage Works by land irrigation only. Both works are supervised by the Mersey and Irwell Joint Committee.

MARPLE URBAN DISTRICT.

The district is divided into three areas for the drainage of foul sewage as follows:—Marple Village, Hawk Green and High Lane being drained to works at Dooley Lane; Strines Road and Strines Village draining to works at Strines; and Brabyns Brow, Arkwright Road and Oldknow Road draining to the Ludworth, Mellor and Low Marple Joint Sewerage Board's Works at Compstall. The Sewage Disposal Works at

Dooley Lane, which receive the greater part of the sewage from the district, will need extending in the near future.

Samples of the final effluent were taken on three occasions by the officers of the Mersey and Irwell Joint Rivers Board, all being classed as good.

MIDDLEWICH URBAN DISTRICT.

The sewage works consist of sedimentation tanks, primary and secondary filter beds. The works are seriously affected by subsidence due to brine pumping.

MOTTRAM-IN-LONGDENDALE URBAN DISTRICT.

The sewage works, consisting of precipitation tanks, continuous filters, and land irrigation, are supervised by the Mersey and Irwell Joint Committee.

NANTWICH URBAN DISTRICT.

A Ministry of Health Inquiry was held on the 15th June, 1933, in respect of an application by the Nantwich Urban District Council for sanction to borrow £58,345 for relaying certain defective sewers, and the construction of new sewage disposal works. Sanction of the Ministry has been received, and the work will shortly be in progress.

On the 14th July, 1933, the County Public Health Committee urged the Urban District Council to carry out the conversion of the 1,220 pail closets existing in the district.

The Urban District Council have given an undertaking to carry out these conversions at an early date.

NESTON URBAN DISTRICT.

Neston sewage works consist of sedimentation tanks, percolating filters, storm tanks, humus tanks, and sludge drying beds. The final effluent is discharged into the tidal portion of the River Dee.

The townships of Burton, Ness and Willaston were taken over from the Wirral Rural District on the 1st April, 1933.

Burton has a gravitation system to receiving tanks and filter for the old part of the village.

The township of Ness is sewered to a disposal works consisting of sedimentation tanks, percolating filter, and humus tanks. The effluent is discharged into the tidal portion of the River Dee.

Willaston sewage works consist of sedimentation tanks and filters with fixed distributors. The works, which are out of date and overtaxed, are being re-conditioned.

A portion of the sewage of Willaston is treated at the Eastham Sewage Works of the Bebington Urban District Council.

NORTHWICH URBAN DISTRICT.

The re-constructed sewage works at Winnington, which receive the sewage of the Urban District and a part of Northwich Rural District, are discharging a satisfactory effluent.

Following representations by the County Public Health Committee, the Urban District Council agreed to increase their expenditure on pail closet conversions from £1,000 to £1,200 per annum.

RUNCORN URBAN DISTRICT.

Most of the sewers empty into a large intercepting sewer which passes under the Manchester Ship Canal at the western boundary of the district, and discharges into the tidal portion of the River Mersey.

SALE URBAN DISTRICT.

The new sewage disposal works are completed and in operation. These works deal with the whole of the sewage of the Urban District. The old sewage works at Dane Road are now disused, excepting for storm water pumping plant.

The works are supervised by the Mersey and Irwell Joint Committee.

SANDBACH URBAN DISTRICT.

The newly-constructed sewage disposal works are in operation, and are discharging a satisfactory effluent.

TARPORLEY URBAN DISTRICT.

The sewage works consist of sedimentation tanks and land irrigation. Samples of the effluent have been reported as satisfactory.

WILMSLOW URBAN DISTRICT.

Work is in progress on the construction of new sedimentation tanks, filters, and humus tanks at the northern outfall works.

The southern sewage works consist of sedimentation tanks, percolating filters, humus tanks, land filtration and storm tanks.

Both works are supervised by the Mersey and Irwell Joint Committee.

YEARDSLEY-CUM-WHALEY URBAN DISTRICT.

The sewage of the Urban District is treated at the works of Whaley Bridge and District Joint Sewerage Board, which consist of sedimentation tanks, percolating filters, humus tanks and storm tanks.

The works are supervised by the Mersey and Irwell Joint Committee.

RURAL DISTRICTS.

BUCKLOW RURAL DISTRICT.

Dunham Massey. Tenders have been invited for the reconstruction of these works, and it is anticipated that a contract for this work will be let at an early date.

Partington. In April, 1933, the County Council Public Health Committee called the attention of the Rural District Council to the necessity for a sewerage and sewage disposal scheme for this parish, and also for the conversion of pail closets and privies.

A scheme is being prepared for submission to the Ministry of Health.

CHESTER RURAL DISTRICT.

The parishes of Great Boughton, Christleton, Newton and Upton are provided with sewers, the sewage being received and treated at the works of Chester Corporation.

Dodleston Parish. The attention of the Rural District Council has been called to the unsatisfactory condition of a small works which deals with the sewage of this parish. The Council's Consulting Engineer has been instructed to prepare a re-construction scheme.

Parish of Eccleston. The sewage works at Eccleston have been re-constructed by the Eaton Estate, and samples of effluent have been reported as satisfactory.

Parish of Pulford. A small works at Pulford deals with the sewage of several properties.

Parishes of Blacon, Great Saughall, Little Saughall, Littleton. The Rural District Council have been urged by the County Council Public Health Committee to provide sewerage and sewage disposal facilities for these parishes, where development is taking place.

CONGLETON RURAL DISTRICT.

Astbury. The attention of the Rural District Council has been called to the necessity for providing sewerage and

sewage disposal facilities for this village. The Council have agreed to sewer the village to a sewage works which the Congleton Town Council propose to establish for the Astbury Marsh district within the Borough.

Church Lawton. A small sewage works, constructed in 1931, is efficiently dealing with the sewage of this township.

Elworth. The sewage works for this area consist of sedimentation tanks, percolating filters, humus tanks and storm tanks.

Holmes Chapel. The sewage works consist of a sedimentation tank and land irrigation. The works are overtaxed and are discharging an unsatisfactory effluent. Temporary improvements have been effected, but the works require to be reconstructed.

Odd Rode. Following representations by the County Council Public Health Committee respecting stream pollution, the Rural District Council have instructed a Consulting Engineer to prepare a comprehensive sewerage and sewage disposal scheme for dealing with the sewage of the several townships in this parish.

Wheelock. As a result of representations by the County Council Public Health Committee the Rural District Council have agreed upon a scheme for sewerage to the recently completed sewage works of the Sandbach Urban District Council.

DISLEY RURAL DISTRICT.

The sewage works consist of precipitation tanks, percolating filters, humus tanks and storm tanks. The works are supervised by the Mersey and Irwell Joint Committee.

The local Medical Officer of Health reports that a new sewerage system is required for Disley Wood area.

NANTWICH RURAL DISTRICT.

Public sewers exist in the parishes of Audlem, Stapeley (part), Shavington-cum-Gresty, Haslington, Willaston and Wistaston.

The townships of Audlem, Bunbury, Church Coppenhall, and Wybunbury are in serious need of adequate sewerage and sewage disposal facilities.

The recently re-constructed sewage works at Wistaston are discharging a satisfactory effluent.

The attention of the Rural District Council has been called to the necessity for reconstructing Haslington sewage

works which have become seriously overtaxed owing to development in the district, and also to the unsatisfactory condition of a small sewage works dealing with a group of houses at Calveley.

NORTHWICH RURAL DISTRICT.

Works of sewerage and sewage disposal have been provided by the Local Authority for the undermentioned parishes.

Parishes.	Public Sewerage Works.	Public Sewage Disposal Works.	Area in Acres.	No. of Houses.	Popu- lation.
Acton ...	1	1	1176	146	531
Anderton ...	2	1	525	107	354
Barnton ...	2	2	759	898	3223
Clive ...	1	1	482	51	178
Comberbach ...	1	1	370	114	418
Davenham ...	3	2	495	197	664
Eddisbury ...	1	1	2085	124	467
Hartford ...	3	1	917	422	1475
Kinderton ...	2	1	1998	107	432
Leftwich ...	2	2	721	324	1041
Little Budworth ...	2	2	3867	140	573
Lostock Gralam ...	2	1	1731	490	2038
Marston ...	1	0	840	150	545
Moulton ...	1	1	474	294	1240
Rudheath ...	1	1	2297	880	3018
Stanthorne ...	1	0	1113	117	290
Weaverham ...	3	3	3622	894	3224
Wincham ...	3	2	1246	274	1018
Winnington ...	1	*1	578	316	1285

* Northwich Urban and Northwich Rural Joint Outfall Works.

A scheme is in preparation for sewer extensions and a new sewage disposal works for the parishes of Davenham, Eaton and Leftwich, which will shortly be submitted to the Ministry of Health.

Owing to the rapid development in the parish of Rudheath the existing sewage works is operating at full capacity and a scheme for enlarging the works is under consideration.

RUNCORN RURAL DISTRICT.

Parishes of Appleton, Grappenhall, Latchford Without, Stockton Heath, Thelwall and Walton Inferior. A Ministry of Health Inquiry was held in October respecting a comprehensive sewerage and sewage disposal scheme for these parishes.

The scheme has been sanctioned and the work will shortly be commenced.

Helsby. These sewage works were reconstructed during 1932 and are discharging a satisfactory effluent.

Moore. These sewage works consist of sedimentation tanks and percolating filters.

Daresbury. A small sedimentation tank with filter deals with the sewage of this parish.

Liverpool Sanatorium. The system of land irrigation has been replaced by sedimentation tanks and percolating filters.

TARVIN RURAL DISTRICT.

The parishes of Barton, Churton, Farndon, Tattenhall, and Waverton are without any facilities for sewerage and sewage disposal.

In July, 1931, the County Council Public Health Committee called the attention of the Rural District Council to the necessity for schemes of sewerage and sewage disposal for these parishes.

A consulting engineer has been appointed to prepare schemes for the above-mentioned parishes.

The Eaton Estate has reconstructed sewage disposal works at Aldford, Eccleston Village, Eccleston Ferry Farm, and Saughton Village.

Kelsall and Tarvin. The present system of cesspool drainage in these parishes will shortly have to be superseded by sewerage and sewage disposal works following the completion of the scheme for a piped water supply.

TINTWISTLE RURAL DISTRICT.

The sewage works consist of precipitation tanks, percolating filters, humus tanks and storm tanks.

Sewage from a portion of the Matley district is received and treated at the sewage works of the Stalybridge and Dukinfield Joint Sewerage Board, which are supervised by the Mersey and Irwell Joint Committee.

Section XIII.-Water Supplies.

Water Supplies.

During the year very close attention has been paid to the water supplies in the County. In my report of last year, page 84, I stated that a survey of all water supplies had been made and issued a special report on the subject. Special attention has been given to those areas shown in the report to have no piped supply. Several schemes both on a large and small scale have been prepared. I can confidently say that Cheshire as a whole is most fortunately placed in regard to water supplies and with the exception of a few isolated cases little hardship has been caused by the drought. This fact however is no excuse for delaying the preparation of schemes for piped water supplies to those areas which are dependent on wells, which in many instances are liable to pollution and are a grave source of danger to the inhabitants generally.

I would again point out the necessity and advisability of the formation of Joint Water Boards not only as a means of conserving but as a means of economy and provision of better supervision over existing supplies.

I have set out below :—

- (1) Water schemes completed during the year.
- (2) Schemes in course of preparation.
- (3) Districts where a piped supply is urgently needed.

MUNICIPAL BOROUGHES.

CONGLETON.

The general conditions of water supply have been fairly satisfactory during the year, but in common with other areas the drought periods experienced have caused a water shortage at different times, not so much on account of diminished yield, but through the rather extravagant consumption during the very dry months.

A considerable amount of new property has been erected in addition to the conversion of 717 pail closets to water closets during the year. This again has necessitated extra consumption.

Nine samples of water were bacteriologically examined during the year.

One shallow spring with a very small yield was found to be totally unsatisfactory and was immediately cut out and turned to waste.

A Chlorination Plant was installed in the early part of December for the High and Low Level supplies.

CREWE.

During the year 288,229,900 gallons of water were supplied to the Corporation by the London Midland and Scottish Railway Company, for the use of the town.

Property belonging to the Railway Company is supplied directly and not through the Corporation.

DUKINFIELD.

During the year 1933 the water supply to Dukinfield has been ample in quantity and excellent in quality.

Extensive alterations are being made in the valleys which contain the impounding reservoirs; these alterations have been made necessary by reason of the Safety of Reservoirs (Provisions) Act, 1931.

At Yeoman Hey a By-wash is under construction which will divert flood water past the reservoir and help in maintaining the purity of the water.

The overflow arrangements at Walker Wood Reservoir have also been altered.

HYDE.

Water for domestic purposes is obtained from Manchester Corporation Water Undertaking.

MACCLESFIELD.

In consequence of Ridgate Reservoir being out of commission on account of repairs; Macclesfield, like a large number of other places felt the effects of the drought. It was, therefore, necessary to augment the regular water supply from supplementary sources.

The compensation water usually discharged from the reservoirs was curtailed, by agreement with the riparian owners. A supplementary supply was obtained by pumping from the Clough Stream, from an area adjoining the existing gathering grounds. Advantage was also taken of an offer of 60,000 gallons of water per day from a deep well at the County Mental Hospital. Approximately 50 million gallons were obtained from additional sources.

As a precautionary measure a slight increase was made in the strength of the chlorination. The purity of the water was maintained and the supply never had to be restricted.

STALYBRIDGE.

With the exception of a group of 185 houses situated in Millbrook, the town derives its water supply from a series of reservoirs in the Brushes Valley which jointly supply Stalybridge, Ashton-under-Lyne, Dukinfield, Mossley, etc.

No samples of the supply were taken during the year.

URBAN DISTRICTS.

ALSAGER.

No diminution of supply was recorded during the prolonged drought although the consumption was then in excess of the normal.

The filter plant has maintained its efficiency; the top layer of filtering material was taken out, washed, and replaced.

ALTRINCHAM.

The Urban District is supplied with water by Manchester Corporation Water Undertaking.

BOLLINGTON.

A constant supply of water has been available during the drought of this year.

During the year an electrically driven centrifugal pump has been installed for the purpose of transferring water from the Low Level Reservoir at Lower Brook.

BOWDON.

The Urban District is supplied with water by Manchester Corporation.

BREDBURY AND ROMILEY.

Water is purchased in bulk from Stockport Corporation, the Urban District Council being responsible for its distribution. New mains have been laid and existing older mains renewed to meet the rapid development which has taken place in the District within recent years. In the outlying parts of the District there are 98 houses which are dependent upon springs or wells for drinking water.

BUGLAWTON.

The supply has been ample during 1933. All parts of the district are now supplied excepting some outlying farms and cottages which have their own private supplies.

Two samples were analysed during the year. The bore-hole supply continues to have a highly plumbo-solvent action on the pipes. The Council have been advised by the County Analyst in this connection and a scheme is being prepared for the introduction of Calcium Hydrate, under pressure, into this supply.

CHEADLE AND GATLEY.

The Urban District is supplied with water by Stockport Corporation. The supply has been satisfactory during the year.

COMPSTALL.

Both reservoirs have been cleaned out and limed. They have been regularly inspected and found satisfactory. A constant supply of good drinking water has been provided in the area in spite of the drought and no restrictions were imposed.

ELLESMERE PORT.

The West Cheshire Water Board supplies the whole of the Urban District with water with the exception of the parish of Ince (recently transferred from the Chester Rural District), which is supplied by the Runcorn Rural District Council, under agreement.

HALE.

All parts of the Urban District are supplied with water by Manchester Corporation.

HANDFORTH.

HAZEL GROVE AND BRAMHALL.

These Urban Districts are supplied with water by Stockport Corporation.

HOLLINGWORTH.

This district is well supplied with water from springs situated at Arnfield. In spite of the dry summer there has been an excellent supply, both in quality and quantity.

HOOLE.

The Urban District is supplied with water by Chester Waterworks Company.

KNUTSFORD.

During the year the gathering grounds of the water supply were condemned, and on the advice of the County Council, the Urban District Council decided to promote a Bill to purchase the Light and Water Undertaking. All the preliminaries were completed, but the Council were defeated by a vote of the Electorate, and consequently the Bill fell through. The Light and Water Company then entered into an agreement with the Manchester Corporation for a bulk supply. An eight inch diameter main has been laid from Bowdon to Knutsford and a minimum pressure of 45 lbs. per square inch is to be available at any point in the district.

LYMM.

Over ninety per cent. of the dwelling-houses in the District are supplied with piped water. Samples of water submitted for chemical and bacteriological examination showed that the standard of purity is being maintained and that the degree of hardness remains practically unaltered.

MARPLE.

The water supply is obtained from the Corporation of Stockport, and is delivered by gravitation into the Council's reservoir at Wybersley. The supply during the past year has been sufficient.

The scarcity of water caused by the drought of 1933 (which still continues at the present time) caused warning notices to be issued and the use of water restricted, with the result that the consumption of water fell from an average of 169,000 gallons per day in December, 1932, to 155,000 gallons per day in December, 1933.

NANTWICH.

Samples of water submitted for bacteriological examination were reported to be of a very high degree of bacterial purity. The source of supply is Baddiley Mere.

NESTON.

The Urban District is supplied with water from a bore hole situated at Little Neston. No treatment of any kind is applied to the water which is described as very pure and well oxidised. Hardness is medium.

NORTHWICH.

The supplemental scheme inaugurated in 1926 has proved very efficient, and the whole of the area is provided with a plentiful supply of pure water.

MIDDLEWICH.

The water supply has been satisfactory both in quality and quantity. No restrictions were placed on the supply during the year.

MOTTRAM-IN-LONGDENDALE.

The district is well supplied from the springs situated at Arnfield. The supply during the year has been satisfactory in both quality and quantity.

RUNCORN.

The water supply consists of Vyrnwy and Runcorn Well water, the latter being chlorinated before being carried to the Reservoir for admixture with Vyrnwy water in equal proportions. The water is examined from time to time both chemically and bacteriologically by the County Analyst to ensure its safety.

The Analyst's reports are satisfactory.

SALE.

The Urban District is supplied with water by Manchester Corporation.

SANDBACH.

No shortage of water was experienced during the exceptionally dry year. It is hoped that when the Carbonating Plant, now on order, is put into operation the troublesome lime deposits will be eliminated.

TARPORLEY.

The Urban District is supplied with water from the Vyrnwy main of the Liverpool Corporation, which passes through the District. The outlying parts of the District, which are rural in character, are dependent upon wells or springs. These supplies have suffered from the drought of last summer.

WILMSLOW.

The Urban District is supplied with water by Stockport Corporation. Complaints of discolouration were referred to the attention of the Corporation's Waterworks Department.

No shortage of water was experienced during the year.

WINSFORD.

Samples of water submitted to the County Analyst have been reported as satisfactory. The question of by-passing the Abbey Arms Brook—which is considered a potential source of

pollution of Oakmere—has again been under consideration. During the year 3,600 yards of water main have been renewed.

YEARDSLEY-CUM-WHALEY.

Although the year has been an exceptionally dry one the district has experienced no shortage of water. The supply has been satisfactory both in quality and quantity.

A bacteriological examination of the Diglee supply was made in September, and the result shewed this water to be of excellent quality.

The reservoirs have been washed out during the year and Diglee and Foxholme cement washed.

RURAL DISTRICTS.

BUCKLOW.

Pickmere. A Ministry of Health Inquiry was held on the 28th February, 1933, respecting a scheme for a piped water supply for a part of this parish, from the Northwich Rural District Council Water Undertaking. The scheme was sanctioned and the works have been completed.

There is still a need for supplies to several other parishes, but in these cases difficulties arise. Negotiations are proceeding with a view to a supply being afforded.

CHESTER.

The Chester Waterworks Company and the Wrexham and East Denbighshire Water Company supply water to several parishes adjacent to the City of Chester.

Other parishes are supplied from the Helsby Water Undertaking of the Runcorn Rural District Council, and the West Cheshire Water Board.

The Public Health Committee of the County Council has urged the Rural District Council to consider schemes for piped supplies for the parishes of Christleton (part), Bridge Trafford and Mickle Trafford.

CONGLETON.

The Odd Rode and District Water Scheme, embracing thirteen parishes, is now complete. It comprises two boreholes 350 feet and 425 feet deep respectively, pumping machinery, three service reservoirs of 315,000, 155,000 and 45,000 gallons capacity, and 42 miles of pumping and distribution mains.

The County Analyst reports that the water is of an extraordinary high degree of organic purity and, although somewhat hard, is ideal for domestic use.

Some 427 houses and farms have already been connected to the mains.

Progress in supplying water to other parishes is also being made. Tenders for a scheme to supply a part of the parish of Somerford have been invited, and details are being prepared for schemes in the parishes of Tetton, Moston, Newbold Astbury and Swettenham.

As far as the District is concerned the water supply may be considered to be very satisfactory.

DISLEY.

The supply has been satisfactory in quantity and quality.

MACCLESFIELD.

The chief bulk supply of water in the area is derived from Macclesfield Corporation Undertaking. In this way the parishes—or portions thereof—of Sutton, Tytherington, Hurdsfield, Upton, Fallibroome and Gawsorth are provided for.

Water in bulk is also supplied to the townships of Mottram St. Andrew, Prestbury, Butley, Fallibroome, and Newton by Stockport Corporation, who also supply directly the townships of Woodford, Poynton (part), Chorley, and Great Warford. Part of the townships of Butley, Rainow and Tytherington are supplied in bulk by the Bollington Urban District Council.

The greater part of Poynton is supplied by the Poynton Collieries Company Water Undertaking.

During the acute shortage of water experienced in the district last summer and autumn the Rural District Council further utilised the Bollington supplies by extending a water main in Butley, thus relieving Macclesfield Corporation to some extent.

Messrs. Brocklehurst-Whiston Ltd., supply 120 dwelling houses in the parish of Sutton. The source is from springs and is a satisfactory supply both in quantity and quality.

Generally the remaining portions of the Rural District are supplied by means of wells and springs.

Though for the most part the Rural District did not suffer to any great extent from last summer's drought, some communities, particularly the township of Hurdsfield, experienced a water famine and had to be supplied by means of a water cart.

The water supply also failed in the case of many isolated dwellings and the inhabitants suffered considerable privation.

MALPAS.

With the exception of the parishes of Malpas and Bickley which are supplied from the Liverpool main and a few farms and other premises adjacent to the Liverpool main, the Rural District is dependent upon well water supplies.

A scheme is being prepared for a piped water supply from the Liverpool main for the parishes of Bickley, Hampton, Marbury and Norbury.

NANTWICH.

But for the timely completion of the Bearstone water scheme it is certain that there would have been a serious water famine in the twenty-two parishes in the southern portion of the Rural District.

A scheme has been submitted to the Ministry of Health for a piped water supply to the parish of Bickerton; water will be pumped from the Liverpool main by means of electrically driven pumps into a new reservoir on Bulkeley Hill which will be of sufficient altitude to supply the parish of Bickerton and will increase the pressures at the highest points of Faddiley, etc.

NORTHWICH.

Upon the completion of the Council's No. 5 Water Scheme for the parishes of Delamere, Eddisbury, Little Budworth (part), Marton (part), and Oakmere, which has been sanctioned by the Ministry of Health, there will be no Parishes or areas in the Rural District which are not adequately supplied with water.

RUNCORN.

Following a Ministry of Health Inquiry held on the 1st November, 1933, a scheme was sanctioned for a piped water supply from the Northwich Urban District Council water undertaking for the Parish of Great Budworth.

The Rural District Council have under consideration schemes for piped water supplies to the parishes of Antrobus, Crowley, Seven Oaks and Newton-by-Frodsham.

These parishes are the only areas in the Rural District which are not reasonably provided with a water supply.

TARVIN.

The local Medical Officer of Health reports that the water supplies in the parishes of Barrow, Broxton, Burwardsley, Guilden Sutton, Newton-by-Tattenhall, Tattenhall, Tilston and Shocklach are in need of improvement.

Following reports by the County Medical Officer on unsatisfactory water supplies in the parishes of Barrow, Burwardsley, Guilden Sutton, Newton-by-Tattenhall, Huntingdon, Rowton (part), Tattenhall and Waverton (part), the Public Health Committee of the County Council have urged the Rural District Council to provide a piped water supply for these parishes.

A scheme is being prepared for supplying the parish of Broxton from the mains of the Nantwich Rural District Council.

TINTWISTLE.

In spite of the drought during the year, with the exception of the Hattersley portion of the District, there has been a continuous supply of pure water.

MINISTRY OF HEALTH INQUIRIES

held in the County during 1933 at which the Department was represented.

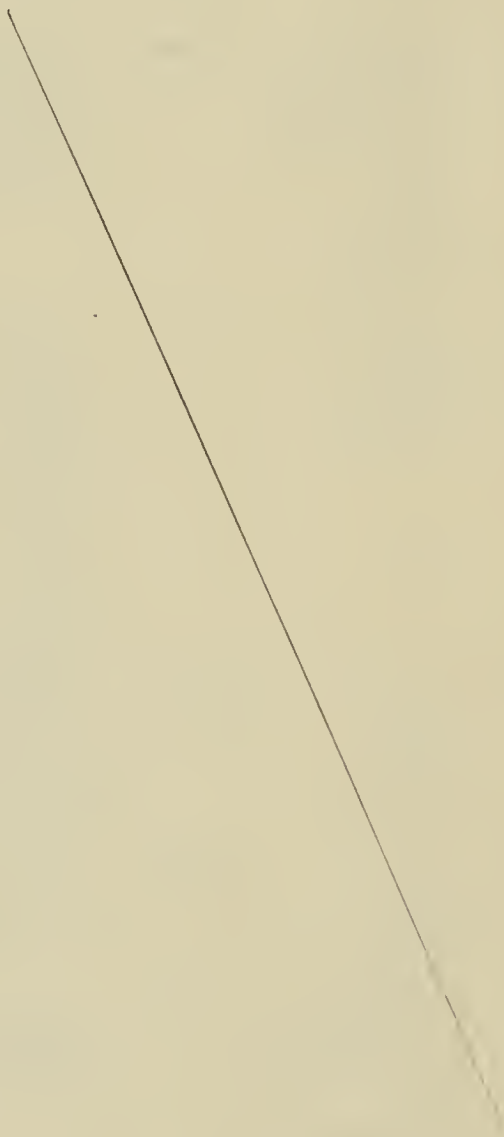
Date of inquiry.	Local Authority.	Amount of Loan. £	Description of Scheme.
28/2/1933.	Bucklow Rural District Council.	1,600	Works of water supply for the parish of Pickmere.
8/3/1933.	Cheadle and Gatley Urban District Council.	450	Purchase of additional land for extension of existing refuse disposal tip.
15/6/1933.	Nantwich Urban District Council.	58,345	Works of sewerage and sewage disposal.
4/7/1933.	Manchester Corporation and Cheadle and Gatley Urban District Council.	6,946	Construction of a joint out-fall sewer to convey the sewage of the Urban District to Manchester Corporation Sewage Works.
18/7/1933.	Bucklow Rural District Council.	—	Appeal to the Ministry of Health by the Mobberley Brick and Tile Company against the refusal of the Bucklow Rural District Council to sanction the construction of a Brickworks in a part of the Rural District which is scheduled under the North Cheshire Regional Town Planning Scheme for residential purposes.
31/10/1933.	Runcorn Rural District Council.	87,000	Works of sewerage and sewage disposal for the parishes of Thelwall, Grappenhall, Latchford Without, Stockton Heath, Walton Inferior and Appleton.
1/11/1933.	Runcorn Rural District Council.	2,800	Works of water supply for the parish of Great Budworth.
17/11/1933.	Ludworth, Mellor and Lower Marple Joint Sewerage Board.	520	Purchase of additional land for the purpose of extending the existing sewage works.
20/12/1933.	Bebington Urban District Council.	112,384	Works of sewerage and sewage disposal.

Section XIV.-Housing.

On the 6th April, 1933, the Ministry of Health issued Circular 1331 to all Local Authorities requesting them to prepare schemes for housing improvement and slum clearance.

The schemes of some Local Authorities appear to be inadequate, and it is intended to make a Survey of the housing conditions in those districts with a view to the Local Authorities concerned being urged to increase the number of houses in their slum clearance programmes.

The following table shews the programmes submitted by Cheshire Local Authorities in response to Circular 1331:—



Local Authority.		Houses to be demolished.					Total number of new houses to be provided.
		In Areas.		Indv. Houses.	Total.		
		No. of Areas.	No. of Houses.				
Altrincham	U.	...	4	89	30	119	42 (final proposals awaited)
Bebington	„	...	—	—	16	16	16
Bollington	„	...	—	—	2	2	—
Cheadle and Gatley	U....	...	11	62	4	66	66
Congleton	B.	...	14	51	—	51	43
Crewe	„	...	5	46	—	46	45
Hazel Grove and Bramhall	U.	...	—	—	12	12	—
Hollingworth	„	...	—	—	10	10	(estimated) 5
Hoylake	„	...	—	—	86	86	—
Hyde	B.	...	9	170	53	223	194
Macclesfield	„	...	—	—	117	117	117
Marple	U.	...	—	—	5	5	(estimated) 5
Middlewich	„	...	—	—	14	14	14
Nantwich	„	...	—	—	150	150	150
Neston	„	...	14	38	13	51	41
Northwich	„	...	—	—	236	236	236
Runcorn	„	...	14	72	5	77	66
Sale	„	...	2	95	25	120	110
Sandbach	„	...	5	19	2	21	21
Stalybridge	B.	...	7	299	—	299	(estimated) 299
Tarporley	U.	...	—	—	16	16	14
Wilmslow	„	...	—	—	10	10	10
Winsford	„	...	—	—	5	5	7
Wirral	„	...	—	—	1	1	—
Yeardsley-cum-Whaley	U.	...	—	—	—	—	—
Bucklow	R.	...	—	—	68	68	68
Chester	„	...	29	106	10	116	97
Congleton	„	...	—	—	29	29	—
Macclesfield	„	...	1	17	—	17	(estimated) 18
Malpas	„	...	—	—	13	13	(estimated) 13
Nantwich	„	...	—	—	11	11	—
Northwich	„	...	—	—	17	17	—
Runcorn	„	...	—	—	46	46	38
Tarvin	„	...	—	—	52	52	49
Tintwistle	„	...	—	—	15	15	—

“Nil Returns” have been received from the under-mentioned Local Authorities:—

Alderley Edge Urban.	Hale Urban.
Alsager Urban.	Handforth Urban.
Bowdon Urban.	Hoole Urban.
Bredbury and Romiley Urban.	Knutsford Urban.
Buglawton Urban	Lymm Urban.
Compstall Urban.	Mottram-in-Longdendale Urban.
Ellesmere Port Urban.	Disley Rural.

Housing (Rural Workers) Acts 1926-31.

The object of these Acts is to secure the provision of housing accommodation for Agricultural Workers and other persons whose economic condition is substantially the same and for the improvement or reconstruction of existing houses and other buildings.

Under Section 2 of the Act Local Authorities are empowered to make grants or loans under certain conditions towards the cost of reconditioning or reconstructing houses unfit for habitation.

The Acts are limited to instances where the value of the dwelling after the completion of the proposed work does not exceed £400, or where the estimated cost of the work is less than £50 per house.

The Local Authority must also satisfy themselves that the reconstructed dwelling is in all respects fit for habitation. After the passing of this Act a scheme was formulated by the County Council, and all Local Authorities and Parish Councils were informed by circular of the details of the scheme.

Since the scheme came into operation, the following work has been carried out:—

Total number of *persons* whose applications have been granted, 75.

Total number of *dwelling*s in respect of which grants have been made or promised, 134.

Total amount of *grants* paid or promised, £10,944 10s. 0d.

SUMMARY of Rural and Urban Districts in which grants have been made.

District.	No. of Applica- tions.	No. of Dwellings concerned.	Amount of Grants. £ s. d.		
Bebington Urban District ...	2	2	100	0	0
Chester Rural District ...	2	6	500	0	0
Congleton Rural District ...	3	4	259	0	0
Malpas Rural District ...	12	21	1,774	10	0
Nantwich Rural District ...	26	36	2,978	0	0
Nantwich Urban District ...	2	4	400	0	0
Northwich Rural District ...	3	5	438	0	0
Runcorn Rural District ...	9	24	1,795	0	0
Tarvin Rural District ...	14	29	2,480	0	0
Wirral Urban District ...	2	3	220	0	0
			<hr/>		
			75	134	£10,944 10 0
			<hr/>		

From my knowledge of the conditions existing in the County, I consider much greater advantage could have been taken of the facilities offered under the scheme. In my opinion these facilities are not sufficiently well known, and greater publicity on the part of Local Authorities would have resulted in many more applications for assistance being received. The time limit for assistance available under the 1926 Act expired on 1st October 1931, but was extended to the 1st October 1936 by the Amendment Act of 1931.

With this extension of time it is to be hoped that with further publicity many more applications will be received.

